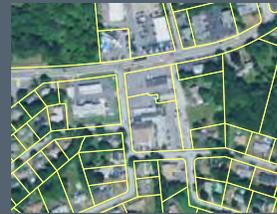


North Grafton
Worcester Street
STRATEGIC PLAN



FINAL REPORT

Prepared by:
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Prepared For:
The Town of Grafton, MA

7/12/17

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1.0 INTRODUCTION

This Strategic Plan evaluates the redevelopment potential of properties located along Worcester Street (Route 122) near the Williams Street intersection. The Town of Grafton commissioned the planning team of Dodson & Flinker/Brovitz Planning & Design to prepare an inventory of existing conditions and a series of conceptual redevelopment scenarios for deteriorated and underutilized properties. The objective of the study is to initiate the transformation of the area into a neighborhood center based on community preferences in terms of scale, density, and mix of uses. The Neighborhood Center idea and concept plan was vetted through a neighborhood site visit and public workshop. The plan is supported by a series of recommended zoning amendments that would facilitate preferred redevelopment opportunities over time.

The Worcester Street Neighborhood Center & Community Gateway (WSNCG) Project Area includes a series of dilapidated and underutilized properties with potential for redevelopment that could provide a

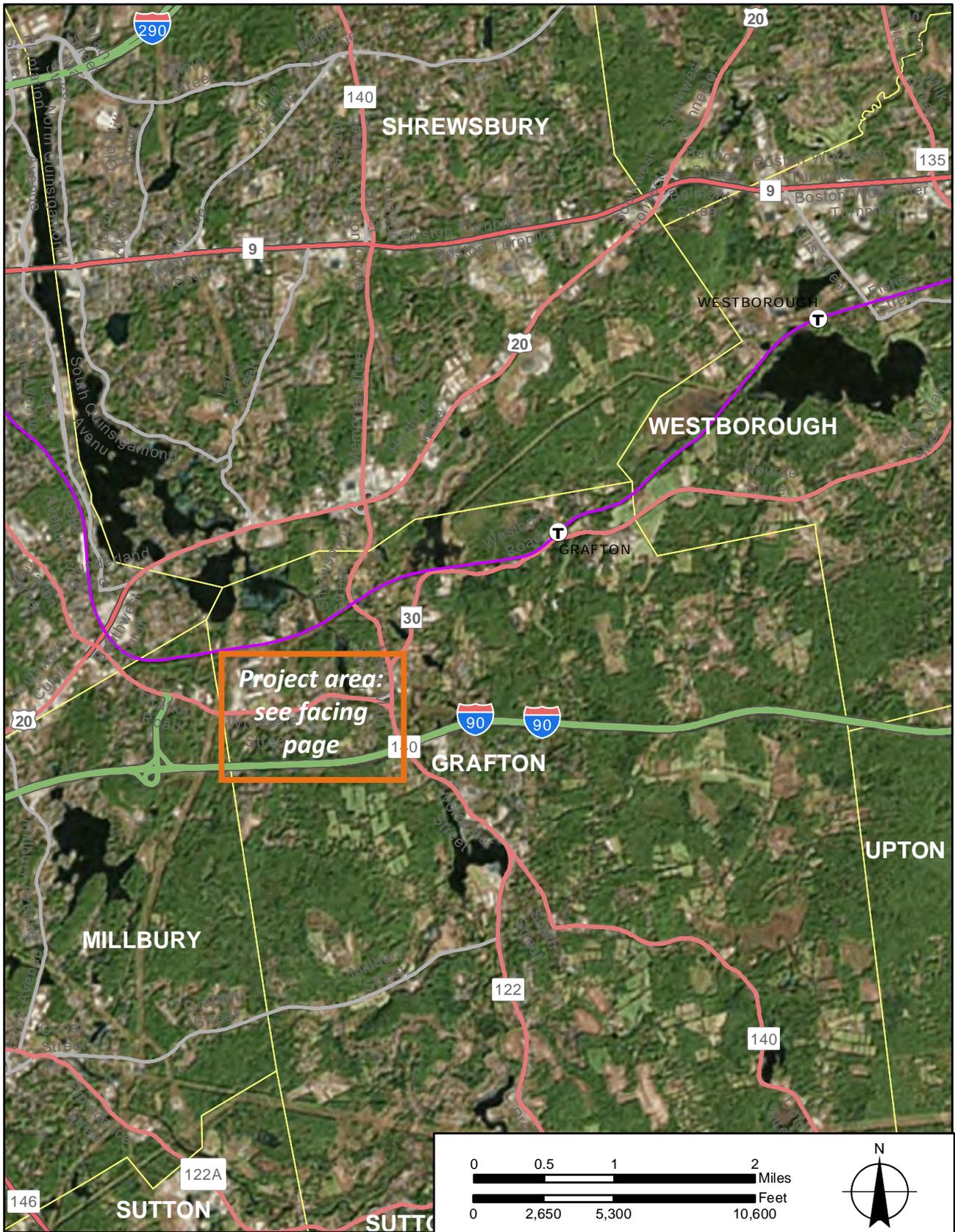
mix of residential and commercial uses at a pedestrian scale, readily accessible to the surrounding neighborhood while serving as a major gateway into Grafton.

This Strategic Plan addresses various challenges and opportunities related to future redevelopment and investment in the Project Area including environmental constraints (e.g., channeled stream, wetlands, drainage), pedestrian and bicycle amenities, streetscape enhancements, parcel boundaries, street layout, deteriorated properties, housing needs and demands, economic opportunities, and design objectives. This plan also provides an overall vision, conceptual development scenarios, and action strategies that can help the town move forward in creating a new Neighborhood Center and gateway into Grafton from the northwest.

The Town of Grafton obtained funding through the Massachusetts Community Compact Initiative grant program to develop the Worcester Street Neighborhood Center & Community Gateway Strategic Plan. The Town then retained the consulting team of Dodson & Flinker Associates and Brovitz Community Plan-



The Worcester Street site is currently a mixed-use complex composed of an outdated collection of buildings, surrounded by parking lots as a result of setback requirements (view facing south).

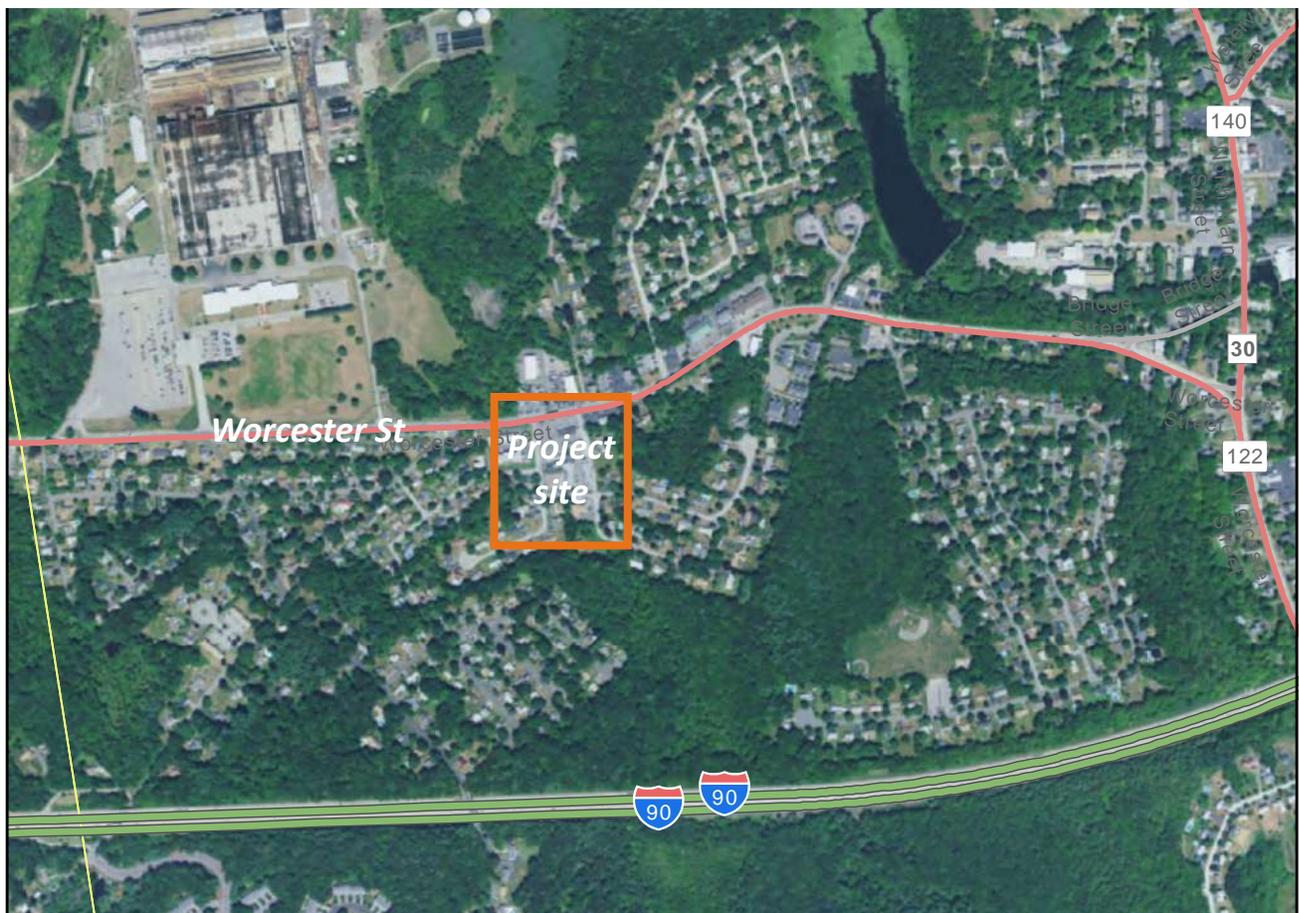


Project area context

ning & Design to assist the community in developing the conceptual redevelopment plan strategic action plan. In preparing the plan, the planning team evaluated the development potential along this segment of Route 122 as well as selected parcels on Williams Street, Hawthorne Street, and Joncas Terrace. This report included an assessment of the following:

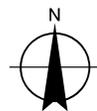
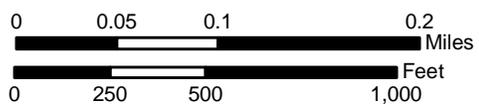
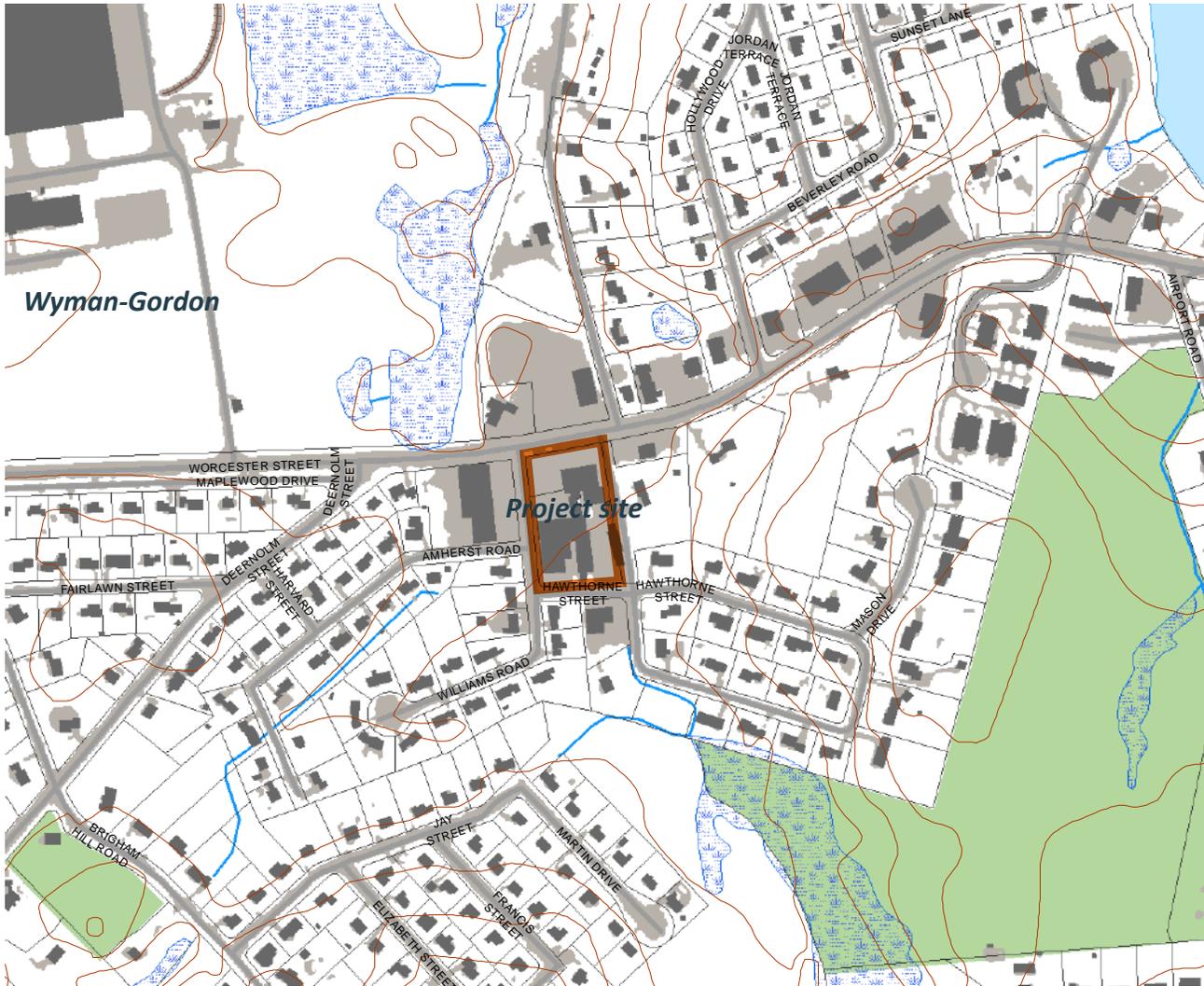
- Existing land uses, property conditions, and trends.
- Existing conditions and potential future “Public Realm” enhancements to infrastructure, streetscapes, pedestrian and bicycle facilities, and open space within the project area.
- Redevelopment scenarios and conceptual plans.
- A detailed zoning implementation action strategy.

The project team engaged residents, business and property owners, and public officials through a series of visioning tools including a two site walks, a design workshop, stakeholder interviews, and a visual preference survey. The result is the Worcester Street Neighborhood Center & Gateway Strategic Plan that addresses the above-mentioned challenges and opportunities with a vision plan illustrating preferred future redevelopment scenarios. This is supported by an outline of strategic actions for Public Realm improvements, zoning bylaw revisions, and proposed implementation measures.



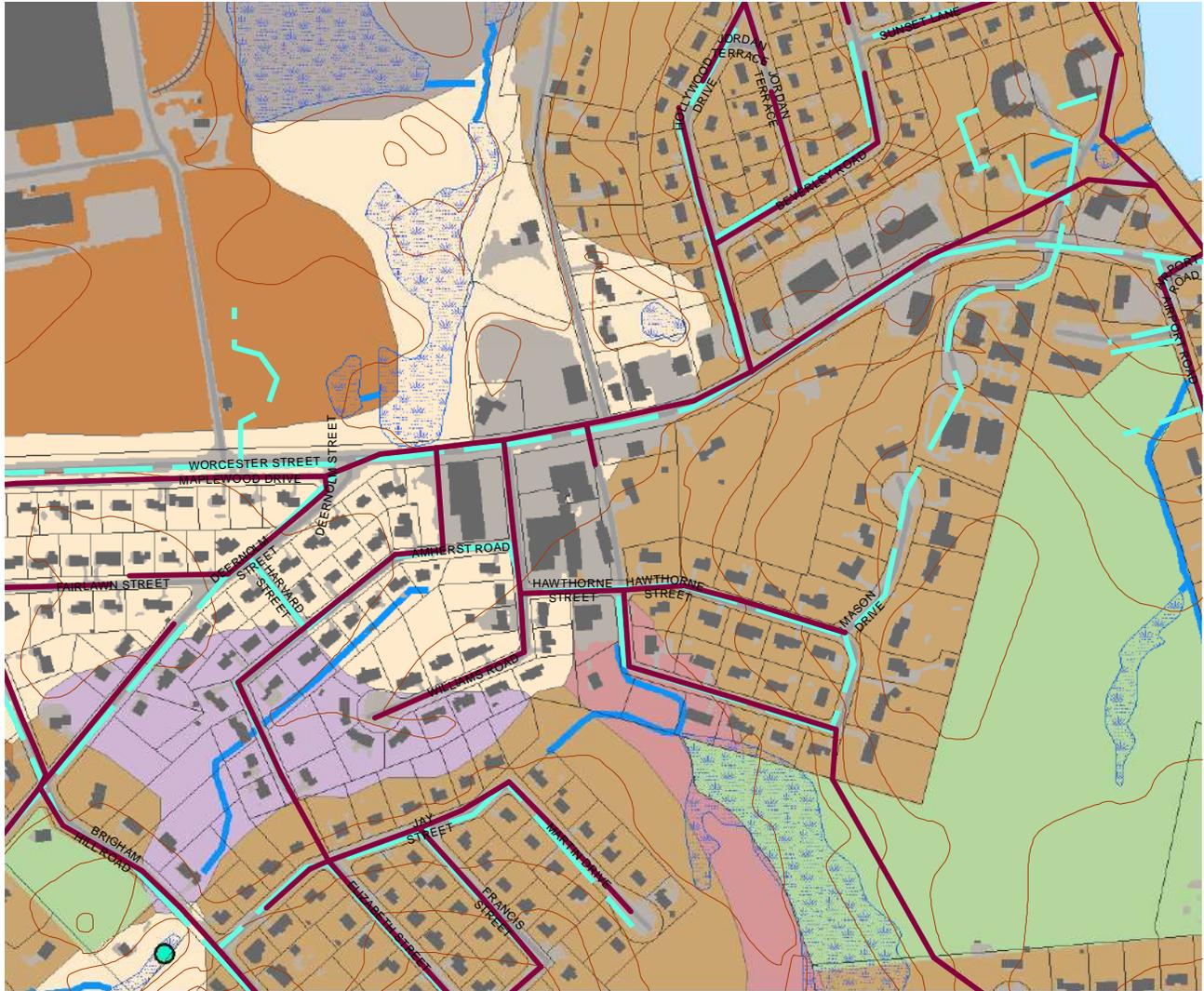
Project area context

NEIGHBORHOOD CONTEXT



Neighborhood Context: Wyman-Gordon, to the northwest of the project site, is Grafton's largest employer.

SITE ANALYSIS

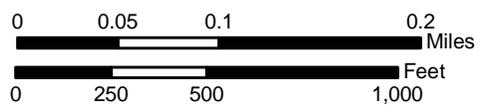


Legend

- Protected Open Space
- Impervious Surface
- Sewer Lines
- Main Water Distribution Lines
- Potential Vernal Pools
- 3m contours (labelled in feet)

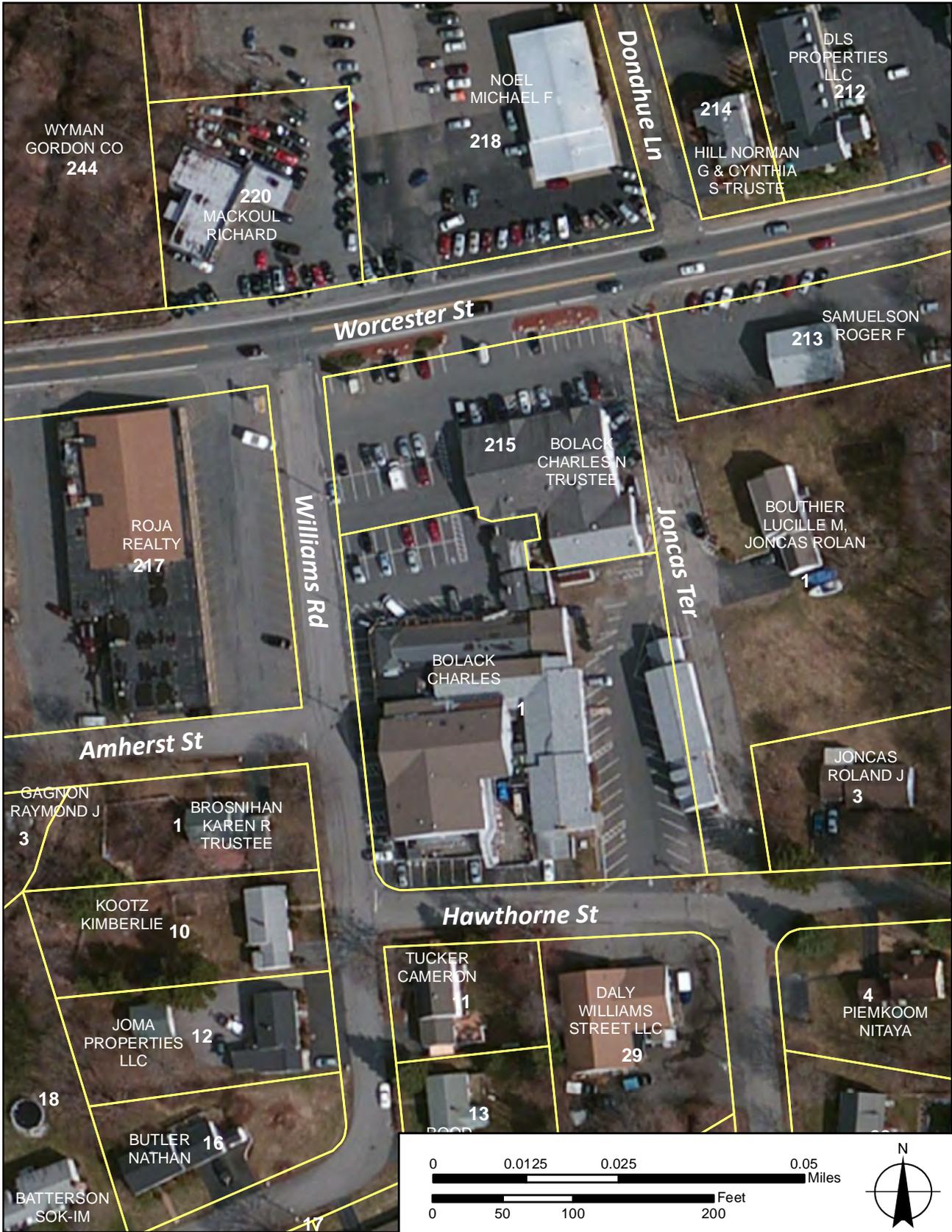
Soil Surface Texture

- Muck
- Mucky peat
- Peat
- Fine sandy loam
- Moderately decomposed plant material
- Variable



Site Analysis: Topography, wetlands, streams and soil conditions; protected open space and public water service.

PROPERTY LINES AND OWNERSHIP



2.0 CONTEXT AND SETTING

The Worcester Street Neighborhood Center & Community Gateway Project Area is in the northwest corner of Grafton along State Route 122. It is less than ½ mile from the Millbury town line to the west and about 1 mile from the Shrewsbury town line to the north. Worcester Street is the primary gateway into Grafton from the west. It is also the main access point to the City of Worcester as well as the Massachusetts Turnpike (Exit 11) which is approximately 1 mile directly west along Rt. 122 from the project area.

Wyman-Gordon, a high-tech metal stamping operation and the largest employer in Grafton, is located along Rt. 122 approximately 1,800 feet from the project area. The residential streets off this segment of Rt. 122 can be characterized as “Post War” neighborhoods, with most of the small single family houses constructed in the late 1940s and early 1950s in simple Cape Cod and Ranch styles. The typical house lot is less than ¼ acre. This series of residential subdivisions represents the largest cluster of Post War Neighborhoods in Grafton, which likely occurred because of proximity to Wyman-Gordon.

There has been little change or reinvestment in this segment of Rt. 122 corridor except for the Cumberland Farms convenience store and gas station located at 217 Worcester Street, which replaced an old dilapidated commercial building in 2015. There was significant neighborhood involvement and concern as the project was going through site plan review with the Planning Board. Some of the main concerns were cut through traffic, congestion at the intersection of Williams Street and Worcester Street, trash management, hazardous materials storage (e.g. gasoline), screening, and scale of the development in relation to the neighborhood. Since opening, the neighborhood appears to have embraced the store.

In addition to Cumberland Farms, there are mostly auto-oriented developments and strip commercial uses along this segment of Route 122. Across Worcester Street from the project area includes Noah’s Auto Sales, AutoWraps, MacKoul’s Cars, and L&M Marble & Granite. Also on the north side of the corridor heading east are Land Planning Inc., Family Dental Care, Paramount Realty Group, McClure’s Barber Shop, Family Chiropractic, Eye Care Assoc., Lucent

Jewelers, Peking Gardens, Grafton Pizza, Donut Star, Five Star Liquors, and several other small restaurants, retail, and service businesses.

The key properties in the project area are located at 215 Worcester Street and 1 Hawthorn Road. These properties are part of a larger development which includes a series of buildings and forms a block between Worcester Street, Williams Street, Hawthorne Street, and Joncas Terrace. These properties are owned by the same property owner and both are for sale.

The properties include several buildings that were added over many years. While many of the buildings are deteriorated and vacant, some support a small mix of residential, retail, office, and personal services. Some structures are also out of code compliance as a result of a recent fire.



Residential subdivisions surround the project area.



The Cumberland Farms on Rt 122 replaced a dilapidated commercial building in 2015, adjacent to the project site.

3.0

PROPERTY CHARACTERISTICS & OPPORTUNITIES

GENERAL PROPERTY CONDITIONS

The WSNCG Project Area includes 4 parcels totaling 3.46 acres of land. The project area is bound by Worcester Street (Route 122) to the north and includes properties located at 213 and 215 Worcester Street, 1 Hawthorn Street, and 1 Joncas Terrace. Possible expansion of the project area might include 29 Hawthorne Street (currently a woodworking shop) as well as other commercial and residential properties in the immediate vicinity as shown on the table below.

The 4 parcels in the project area are in private ownership. Three are in commercial or mixed use and one is a single family home. Over the past 10 years, the total property values in the project area have increased by nearly \$1.5 million (or 32%). However, 1 Hawthorn Street, a key property in the Project Area lost 20% of its value over the past 10 years.

THE PUBLIC REALM

The WSNCG Project Area is served by Worcester Street (State Route 122) and access to properties is provided by Williams Road and Hawthorn Street (Town roads), and Joncas Terrace (a private street). Worcester Street has a 60-foot right-of-way and includes 2 travel lanes and paved shoulders. Worcester Street is a heavily traveled corridor and a primary access to and from Grafton.

There are no sidewalks located along the project area frontage. A sidewalk is located to the west of project area along the south side of Worcester Street from the intersection of Williams Road, in front of Cumberland Farms, and extending to the Millbury town line. There are no bicycle facilities located along Route 122. Streetscape is limited and typically includes landscaped islands along street frontages which are generally in poor condition on this segment of Worcester

Street. There are no planting strips or street trees within the public right-of-way.

The project area is accessed primarily by Williams Road and Hawthorn Street. Williams Road has a 40-foot right-of-way with two travel lanes and a sidewalk on the west side between Worcester Street and Amherst Street. There is no planting strip or street trees within the public right-of-way. Hawthorn Street has a 40-foot right-of-way with two travel lanes. There are no sidewalks, planting strips, or street trees along this street. Joncas Terrace is a private way between Worcester Street and Hawthorn Street. While this serves as a secondary access to the neighborhood, the roadway is part of the property at 1 Joncas Terrace. The Town has a public easement over the Joncas Terrace but is not responsible for maintaining it, and the roadway is in poor condition.

The WSNCG Project Area is served by public water and sewer provided by the Town of Grafton with sufficient capacity for future growth. Eversource provides electric power, and NStar provides medium pressure natural gas to the project area and fiber optic cable is available in Route 122.

WORCESTER STREET NEIGHBORHOOD CENTER & GATEWAY PROPERTY INVENTORY & ANALYSIS 2017/CHARACTERISTICS

P.A. ID	St. No	Street	Zoning	Land Area (Acres)	Land Area (S.F.)	Street Frontage	Est. Parking Spaces	Year Built	FY96 Total Value	FY07 Total Value	FY16 Bldg Value	FY16 Land Value	FY16 Total Value	Δ Total Value FY07-16	LUC	LUC Description	Building Finished (S.F.)	Bldg Stories	FAR	
1	215	Worcester St	CB	0.69	30,056	381	45	1964	\$513,500	\$785,400	\$713,200	\$212,600	\$925,800	18%	326	Small Commercial Plaza	7,700	1	0.26	
2	1	Hawthorn St	CB/R20	1.35	58,806	281	75	1960	70	\$1,217,100	\$1,958,200	\$303,500	\$1,258,400	\$1,561,900	-20%	31	Mixed Use Building	34,680	2	0.59
3	213	Worcester St	CB	0.38	16,553	218	40	1976	\$116,500	\$225,000	\$146,700	\$143,300	\$290,000	29%	332	Repair/Service Garage	2,500	2.5	0.15	
4	1	Joncas Terrace	CB/R20	1.04	45,302	237	4			\$242,600	\$89,700	\$332,300			101	Single Family Home		2	0.00	
E1	29	Hawthorn St	R20	0.41	17,860	212	30	1966	\$171,600	\$234,700	\$153,500	\$150,400	\$303,900	29%	316	Warehouse	4,410	1	0.25	
E2	3	Hawthorn St	R20	0.37	16,117	243	4	1963	\$131,500	\$304,700	\$141,800	\$83,400	\$225,200	-26%	101	Single Family Home	1,188	2	0.07	
E3	218	Worcester St	OLI	1.60	69,696	235					\$531,200	\$229,000	\$760,200		330	Auto Showroom		1	0.00	
E4	217	Worcester St	CB	1.32	57,499	495		2015	\$798,900	\$1,084,300	\$1,046,800	\$297,100	\$1,343,900	24%	325	Retail Store	4,513	1	0.08	
E5	220	Worcester St	CB	0.46	20,038	140					\$131,200	\$194,000	\$330,600		330	Auto Showroom	3,321	1	0.17	
E6	244	Worcester St	OLI			435									441	Industrial Land (Secondary)				
E7	209	Worcester St	CB/R20	2.00	87,120	180		1950							101	Single Family Home		2		
E8	207	Worcester St	CB/R20	3.70	161,172	1080		1920							102	Two Family Home		2		
E9	197	Worcester St	CB/R20	0.77	33,541	108	8											2		
TOTAL				14.09	47,212	327			\$2,949,100	\$4,592,300	\$3,410,500	\$2,657,900	\$6,073,800	32%			58,312		0.17	
AVERAGE				1.17	47,212	327		1965	\$491,517	\$765,383	\$378,944	\$295,322	\$674,867	-12%			8,330		0.17	

E = Potential Project Area Expansion Parcel

WORCESTER STREET NEIGHBORHOOD CENTER & GATEWAY PROPERTY INVENTORY & ANALYSIS 2017/OWNERSHIP

P.A. ID	Parcel ID	St. No	Street	Zoning	Property Owner	Property Owner Address	Uses on Site
1	110/035.0-0000-0012.0	215	Worcester St	CB	BOLACK CHARLES N TRUSTEE	N. GRAFTON, MA	Commercial Building: Pub 122, Ultramart Convenience Store, Vacant Space
2	110/035.0-0000-0014.0	1	Hawthorn St	CB/R20	BOLACK CHARLES	N. GRAFTON, MA	Mixed Use Building: Oasis Hot Tubs, Bay State Electrical Repair, Gourmet Creations, McClure Barbershop, Everthings Ten Boutique, Accord Dental, and 4 Residential Apartments
3	110/035.0-0000-0008.0	213	Worcester St	CB	SAMUELSON ROGER F	N. GRAFTON, MA	Roger's Auto Service
4	110/035.0-0000-0007.0	1	Joncas Terrace	CB/R20	BOUTHIER L./JONCAS R.	GRAFTON, MA	Single Family Residence
E1	110/035.0-0000-0037.0	29	Hawthorn St	R20	SAMARA RONALD	WORCESTER, MA	Woodworking Shop (former Pool Supply, Gym, Pool)
E2	110/035.0-0000-0015.0	3	Hawthorn St	R20	JONCAS ROLAND	GRAFTON, MA	Single Family Residence
E3	110/035.0-0000-0003.0	218	Worcester St	OLI	NOEL MICHAEL	N. GRAFTON, MA	Noel's Auto
E4	110/035.0-0000-0054.0	217	Worcester St	CB	CUMBERLAND FARMS INC	FRAMINGHAM, MA	Cumberland Farms
E5	110/035.0-0000-0002.0	220	Worcester St	CB	MACKOUL RICHARD	N. GRAFTON, MA	MacKoul's Cars
E6	110/035.0-0000-0001.0	244	Worcester St	OLI	WYMAN-GORMAN	N. GRAFTON, MA	Open lands on east side of property
E7	110/035.0-0000-0006.0	209	Worcester St	CB/R20	GRAFTON LAND TRUST	GRAFTON, MA	Single Family Residence
E8	110/026.0-0000-0099.0	207	Worcester St	CB/R20	GRAFTON LAND TRUST	GRAFTON, MA	Two Family Residence
E9	110/026.0-0000-0100.0	197	Worcester St	CB/R20	Fivestar Liquors		Fivestar Liquors

E = Potential Project Area Expansion Parcel



Worcester Street looking east



Worcester Street looking west



Streetscape at 217 Worcester Street (Cumberland Farms)



Streetscape at 215 Worcester Street



Streetscape at 213 Worcester Street



Williams Road



Hawthorne Street



Williams Road



Joncas Terrace



Amherst Street

EXISTING PROPERTY USE AND FUTURE OPPORTUNITIES

215 Worcester Street 110/035.0-0000-0012.0 & 1 Hawthorne Street 110/035.0-0000-0014.0

Existing Conditions: These two parcels make up the key property targeted for redevelopment. They are in common ownership (Charles Bolack Trustees) and share buildings and parking spaces. Collectively, these parcels include 2.04 acres, about 42,000 GFA of building space, and an estimated 120 parking spaces.

The properties occupy an area roughly equivalent to a village scale block, and the parcels are enclosed by streets on each side providing good access from Route 122 and well as the neighborhoods to the south. This block has 216 feet of frontage along Worcester Street; 377 feet of frontage along Williams Road; 281 feet of frontage along Hawthorn Street; and 402 feet of frontage along Joncas Terrace. There are no sidewalks, planting strips, or street trees located along these 4 streets. Most of the frontage along Williams Road, Hawthorn Street, Joncas Terrace is paved over with much of it serving as an open curb cut for vehicle access and parking. There is a landscaped island along part of the Worcester Street frontage which is in poor condition.

There are four buildings on the parcels of which 3 are attached and another is detached. The separate building to the rear straddles the boundary with the single-family home at 1 Joncas Terrace.

The building at 215 Worcester Street was constructed in 1964 and is classified as a small shopping plaza (LUC 326). The 1-story structure has about 7,700 SF and is divided into 4 storefronts of which two are currently vacant. There are 4 buildings located on the 1 Hawthorn Street property which is classified as multiple use (LUC 031) with a total of 34,680 SF of finished floor area. These buildings were constructed between 1960 and 1970 and have been used for multiple purposes over the past 40 years.

Current businesses on the properties include Pub 122, Tony's Pet Oasis, Ultramart Convenience Store, Oasis Hot Tubs, and Accord Dental. Recent tenants include McClure Barbershop, Gourmet Creations, Bay State Electrical Repair, and Everything's Ten Boutique.



215 Worcester St includes a complex of ageing mixed use buildings with parking in the front.

There are also 4 apartment units on the upper floor of the rear building located on Hawthorne Street.

There are approximately 120 parking spaces distributed throughout the property. A double row of parking is located along the Worcester Street frontage between the public right-of-way and the building. Most of the parking is located along Williams Road where frontage is an open curb cut. The perpendicular parking in front of the rear building where the pet store is located requires drivers to back out directly into Williams Street.

There are no known environmental constraints on these parcels. However, there is a creek that has been channeled under the site, continuing beneath Worcester Street to a wetland area behind Noah's Auto. This creek also runs under 29 Hawthorne Street and there is a culvert at the south end of this property adjacent to Hawthorn Street where the open creeks enters the underground channel.

The front parcel (215 Worcester Street) is located entirely in the Community Business (CB) zoning district. The rear parcel (1 Hawthorn Street) is split between zoning districts with the north end of the parcel located in the CB district and the south end of the parcel (including the vast majority of building space) in the Residence 20 (R20) district. The CB boundary along this segment of Worcester Street extends along the north and south sides of the corridor to a depth of 200 feet measured from the edge of the right-of-way. This zoning boundary splits several parcels along the corridor and may pose a significant constraint to redevelopment.

Future Opportunity: The property is for sale and has good potential for mixed use including neighborhood scale commercial and residential uses. Based on the poor condition and code issues, it is unlikely that any of the current buildings would remain under future redevelopment programs.



A creek is piped under 215 Worcester St, and outflows to a wetland behind Noah's Auto.

213 Worcester Street (110/035.0-0000-0008.0)

Existing Conditions: This 0.38-acre (16,553 SF) parcel is owned by Roger Samuelson who operates Roger's Auto Service on site. The property has 218 feet of frontage on Worcester Street and 76 feet on Joncas Terrace. The primary access is off Joncas Terrace but the parking area in front of the building is paved up to the public right-of-way creating an open curb cut except for wheel stops demarcating each parking space. The lot can hold about 40 parked cars. There is no landscaping on site except for a small island and a ground sign at the northwest corner. The property is located entirely in the Commercial Business (CB) zoning district. The 2 ½ story building was constructed in 1976 and has about 2,500 square feet of usable space.

Future Opportunity: Roger's Auto Service is a successful and well respected local business. Auto related uses in a segment of Route 122 are common and intended for this area. At the owner's discretion, the property has potential for other commercial and mixed-use development which could be explored. Future redevelopment would probably be more viable in combination with other surrounding properties.



213 Worcester St is currently used as an auto service shop.

1 Joncas Terrace (110/035.0-0000-0007.0)

Existing Conditions: This single-family home is owned by Lucille Bouthier. The 1.04-acre parcel has about 237 feet of frontage. However, the parcel includes Joncas Terrace which provides access between Worcester Street and Hawthorn Street. The property is split between zoning districts with the north end of the parcel (including most of the house) located in the CB district and the south end of the parcel in the Residence 20 (R20) district.

Future Opportunity: At the owner's discretion, the property has good potential for commercial, residential (multi-family) or mixed use. However, redevelopment of this properties is probably more viable in combination with adjacent properties.

ADJACENT PROPERTIES

In addition to the core project area properties, there are other adjacent and nearby properties that could potentially contribute to the neighborhood center and community gateway in various way.

29 Hawthorne Street (110/035.0-0000-0037.0)

This 0.41-acre (17,850 SF) parcel is located on the south side of Hawthorn Street with two frontages totaling 212 feet. The 4,400 SF building was constructed in 1966 and is in good condition. It is currently used for storage and a small woodworking shop. Previous uses included a fitness gym with an indoor swimming pool and a pool service and supply store. The property has good potential for a variety of neighborhood scale commercial uses.

218 Worcester Street (110/035.0-0000-0003.0)

This 1.6-acre parcel has 235 feet of frontage and is directly across Worcester Street from the WSNCG Project Area. It is occupied by Noah's Auto which is a well-established and successful local business. At the owner's discretion, this property could be redevelopment in the future as a mixed use commercial and residential project that would extend the new neighborhood center across Route 122 and provide direct access to nearby residents on the north side of the



1 Joncas Terrace includes a single family home, which at the owner's discretion could become part of the project area.



29 Hawthorne St includes a commercial building currently used as a woodworking shop.

corridor. New development on this side of Worcester Street could also provide enclosure along this segment of Worcester Street creating a sense of arrival and an attractive gateway into Grafton.

220 Worcester Street (110/035.0-0000-0002.0)

This 0.46-acre parcel has 140 feet of frontage and is directly across Worcester Street from the WSNCG Project Area. It is occupied by MacKoul's Auto which is a well-established and successful local business. At the owner's discretion, this property could be redevelopment in the future as a mixed use commercial and residential project. As with Noah's Auto, redevelopment of this property would extend the neighborhood center across Worcester Street and create an attractive gateway into Grafton.



218 Worcester St is occupied by Noah's Auto.

244 Worcester Street (110/035.0-0000-0001.0)

This is the eastern edge of the Wyman-Gordon property which is adjacent to 218 and 220 Worcester Street. Much of the land in is woodlands with wetlands and access to Hovey Pond. The property has potential to serve as a nature park or preserve with a series of trails and passive recreational uses. With limited public open spaces available to the neighborhoods north and south of Worcester Street, this property could be a well-utilized community space.

217 Worcester Street (110/035.0-0000-0054.0)

The Cumberland Farms convenience store and gas station was constructed in 2015. The convenience store is over 4,500 SF. The 1.32-acre parcel has 269 feet of frontage on Worcester Street, 225 feet on Williams Road, and 245 feet on Amherst Street. There are curb cuts and sidewalks located on the Worcester Street and Williams Road frontages. Landscaping is limited on site with mostly grass and low shrubs along Worcester Street and Williams Road. There are not street trees located on either frontage. In addition to the gas pumps, there are 20 demarcated parking spaces on site.



220 Worcester St is occupied by MacKoul's Auto.



217 Worcester St is occupied by Cumberland Farms.



244 Worcester St is occupied by Wyman Gordon.

3 Hawthorne Street (110/035.0-0000-0015.0)

This single-family home is owned by Roland Joncas. The 0.37-acre parcel has about 150 feet of frontage on Hawthorn Street and 93 feet on Joncas Terrace. The property is in the Residence 20 (R20) district. At the owner’s discretion, the property has future potential for residential (multi-family) or mixed-use redevelopment in combination with adjacent properties.

209 Worcester Street (110/035.0-0000-0006.0)

This single-family home is located on a 2-acre lot with 180 feet of frontage on Worcester Street. It property is owned by the Grafton Land Trust. The home was built in 1950. Most of the lot is wooded and abuts homes on Hawthorn Street to the rear. Future neighborhood park, nature park and trails?

207 Worcester Street (110/026.0-0000-0099.0)

This 2-family home is located on a 3.7-acre lot with 1,080 feet of frontage on Worcester Street. It property is owned by the Grafton Land Trust. The home was built in 1920. Most of the lot is wooded and abuts homes on Hawthorn Street to the rear. Future neighborhood park, nature preserve, and trails?



209 Worcester St is a single family residence, owned by the Grafton Land Trust.

197 Worcester Street (110/026.0-0000-0100.0)

This .77-acre parcel is the location of Fivestar Liquors. The property has 108 feet of frontage on Worcester Street. The building has over 8,000 square feet of finished floor area and there are 12 parking spaces on site. This property has potential for redevelopment as a mixed use commercial building.

SURROUNDING RESIDENTIAL NEIGHBORHOODS

The neighborhoods in the northwest section of Grafton will be the primary customers for the new neighborhood center and gateway, particularly those residents that have direct access to Worcester Street on the north and south side of the corridor. The following is a summary of residential streets in the primary trade area. In all there are an estimated 562 households within walking distance on the new neighborhood center.



207 Worcester St is a single family residence, owned by the Grafton Land Trust.



197 Worcester St is the location of Five Star Liquors.



3 Hawthorne St is a single family residence, and at the owner's discretion, could become part of the project area.

SOUTH SIDE OF WORCESTER STREET

The following residential streets are located between the Millbury town line to the west, Worcester Street to the north, the Massachusetts Turnpike to the south, and Rt 30/140.

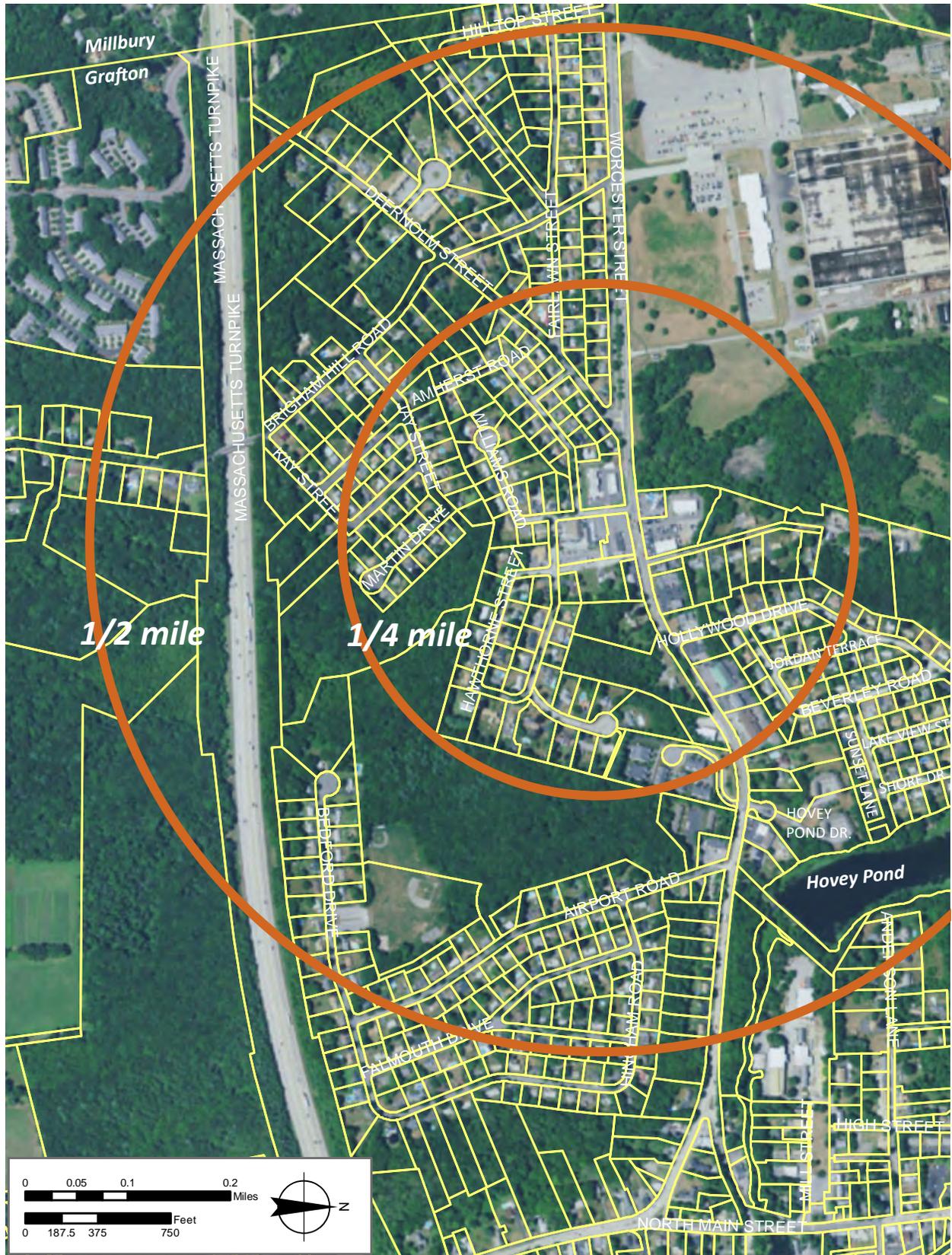
Street	Est. DUs	Residential Types
Hilltop St	24	Single Family Homes
Worcester St	9	Single Family Homes
Fairlawn St	27	Single Family Homes
Brigham Hill Rd	27	Single Family Homes
Maplewood Dr	11	Single Family Homes
Deernolm St	25	Single Family Homes
Bailin Cr	29	Rosewood Gardens Apts + SF
Harvard St	2	Single Family Homes
Jay St.	16	Single Family Homes
Martin St.	11	Single Family Homes
Francis St.	10	Single Family Homes
Kay St.	5	Single Family Homes
Elizabeth St.	9	Single Family Homes
Williams Rd	16	Single Family Homes
Amherst St	22	Single Family Homes
Hawthorne St	25	Single Family Homes
Mason Dr.	8	Single Family Homes
Northgate Court	20	Commons at Northgate Condos
Airport Rd	34	Single Family Homes
Hingham Rd	43	Single Family Homes
Bedford Dr	23	Single Family Homes
Falmouth Dr	23	Single Family Homes
Gloucester Rd	11	Single Family Homes
Grafton Gardens/Off Airport	12	Condos
Worcester St – Williams to Rt. 30	14	1-4 Family Homes
Total	456	

NORTH SIDE OF WORCESTER STREET

The following residential streets are located between the Millbury town line to the west, Worcester Street to the south, the railroad corridor to the north, and Hovey Pond/Quinsigamond River to the west.

Street	Est. DUs	Residential Types
Donahue Lane	6	Single Family Homes
Hollywood Drive	27	Single Family Homes
Beverly Rd	19	Single Family Homes
Jordan Terrace	9	Single Family Homes
Lakeview Drive	9	Single Family Homes
Shore Drive	13	Single Family Homes
Worcester St	1	Single Family Home
Hovey Pond Dr	22	H.P. Estates - Condos
Total	106	

NEIGHBORHOODS WITHIN WALKING DISTANCE OF THE STUDY AREA



4.0 LAND USE REGULATIONS

ZONING REGULATIONS

There are 2 base zoning districts that cover the WSNCG Project Area - the Community Business (CB) District and the Residential (R20) District. The intended location, purpose, dimensional standards, and permitted uses in these zoning districts are as follows:

Community Business (CB) Zoning District

The stated purpose of the CD in Section 3.1.4.6 of the Zoning By-Law is to “provide sites for businesses that serve the entire town which, through proper siting, landscaping and design, create amenities and avoid the appearance of commercial strips, and adverse impacts on abutting streets and uses”.

The CB extends 200 feet to the north and south of the Worcester Street corridor measured from the edge of the public right-of-way. The effect of creating boundaries on measured depth rather than property lines is that parcels will be divided into two or more zoning districts which can be an obstacle to reuse or redevelopment of the property. This is the case in the WSNCG Project Area where 3 of the 4 parcels are split between CB and R20 including 215 Worcester Street, 1 Hawthorne Street, and 1 Joncas Terrace.

While one of the purposes of the CB is to “avoid the appearance of commercial strip”, the dimensional standards require a large lot size, wide frontage, low building coverage, deep setbacks from the street, and parking in front of the building – all characteristics of strip development. Traditional neighborhood and village centers are designed to create a desirable pedestrian environment by forming a street wall and enclosing the sidewalks with buildings and outdoor amenities. The minimum 40-foot front building setback severs the relationship between the pedestrian and building. This setback combined with low building coverage and high parking ratios also typically results in the developer having few options but to place the parking lot between the building and sidewalk further diminishing the pedestrian environment as well as safety.

Two of the properties in the WSNCG Project Area do not meet the minimum lot size requirements of the CD (213 and 215 Worcester Street); 1 Hawthorn Street does not meet any of the setback requirements; 1 Hawthorn Street and 215 Worcester Street exceed the maximum building coverage requirement; and 1 Joncas Terrace has no frontage on a public street. In effect, all properties in the Project Area fail to meet the basic dimensional requirements.

A good example of a new development project that meets the dimensional standards of CB is the Cumberland Farms, where the building is located in the interior of the lot and the perimeter is a grass setback area on all sides. The drawback to this site plan is that it has no relationship with the street or pedestrians on the sidewalk.

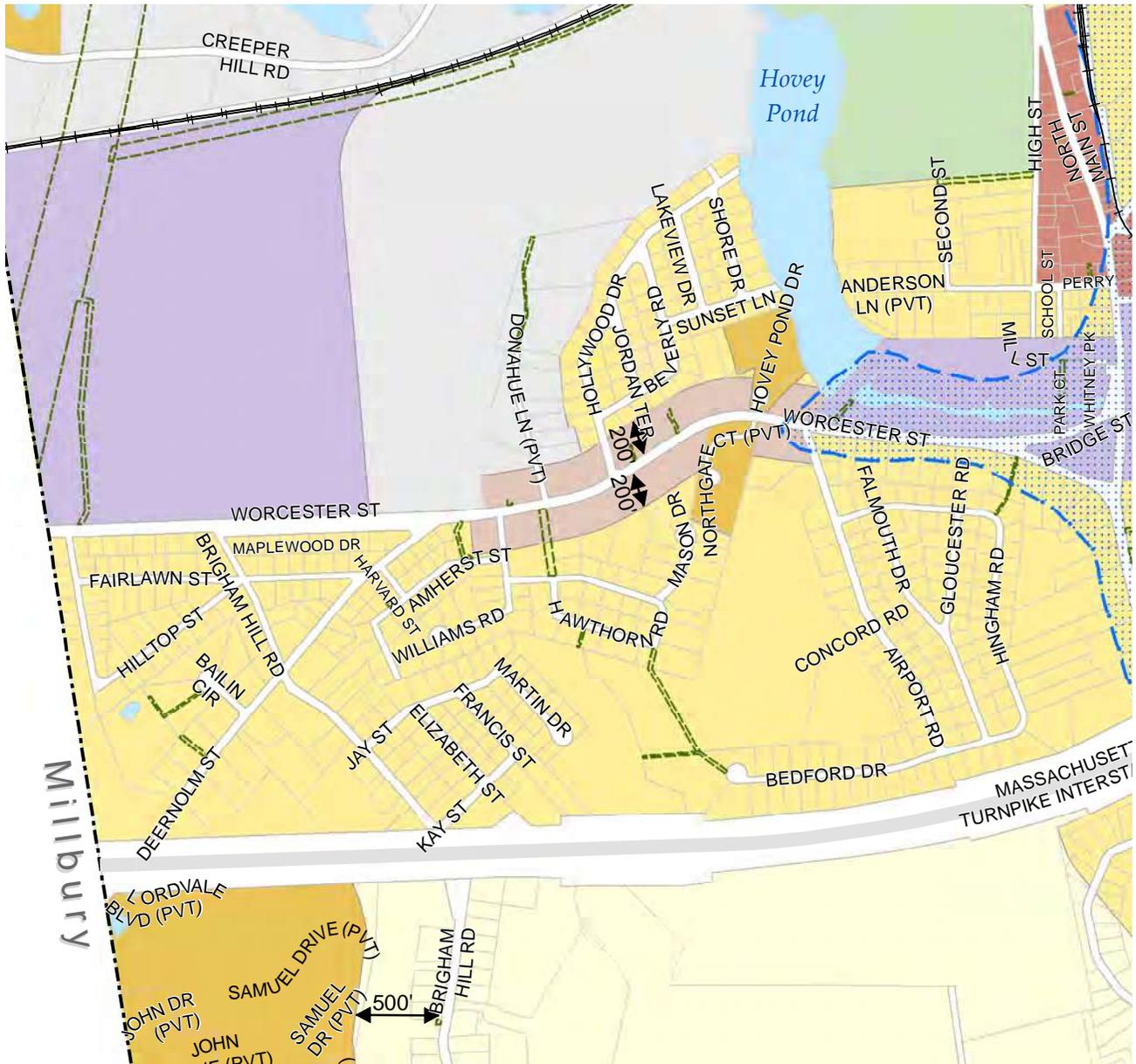
The Use Regulation Schedule in Section 3.2.1.3 of the Zoning By-Law does not allow residential uses in the CB district except for lodging (hotels, motels, and boarding houses) and “apartments for security guard” by Special Permit. Currently, there are several residential units in the WSNCG Project Area and more would be anticipated if the property is redevelopment as a mixed-use project. (Recommended changes to the zoning regulations for the WSNCG Project Area are included in Section 7: The Implementation Strategy).

Medium Density Residential (R20) Zoning District

The R20 Zoning District covers all the neighborhoods along the north and south side of the Worcester Street Corridor District except for Hovey Pond Estates and Northgate condominiums which are located in the Residential Multi-Family District (RMF). The stated purpose of the R20 in Section 3.1.4.6 of the Zoning By-Law is to “provide sites for medium density residential development with respect to the existing character of the neighboring homes and properties, including compatible, related home-oriented activities and pursuits in a small village environment”.

The minimum lot size in the R20 is 20,000 SF (or .46 acres) and minimum frontage is 125 feet. However, the typical lot size for homes in the neighborhoods is in the range of 9,000 to 15,000 and the type frontage is between 75-100 feet. As these simple Ranch and Cape Cod homes have been expanded over the

ZONING IN THE PROJECT AREA (2016)



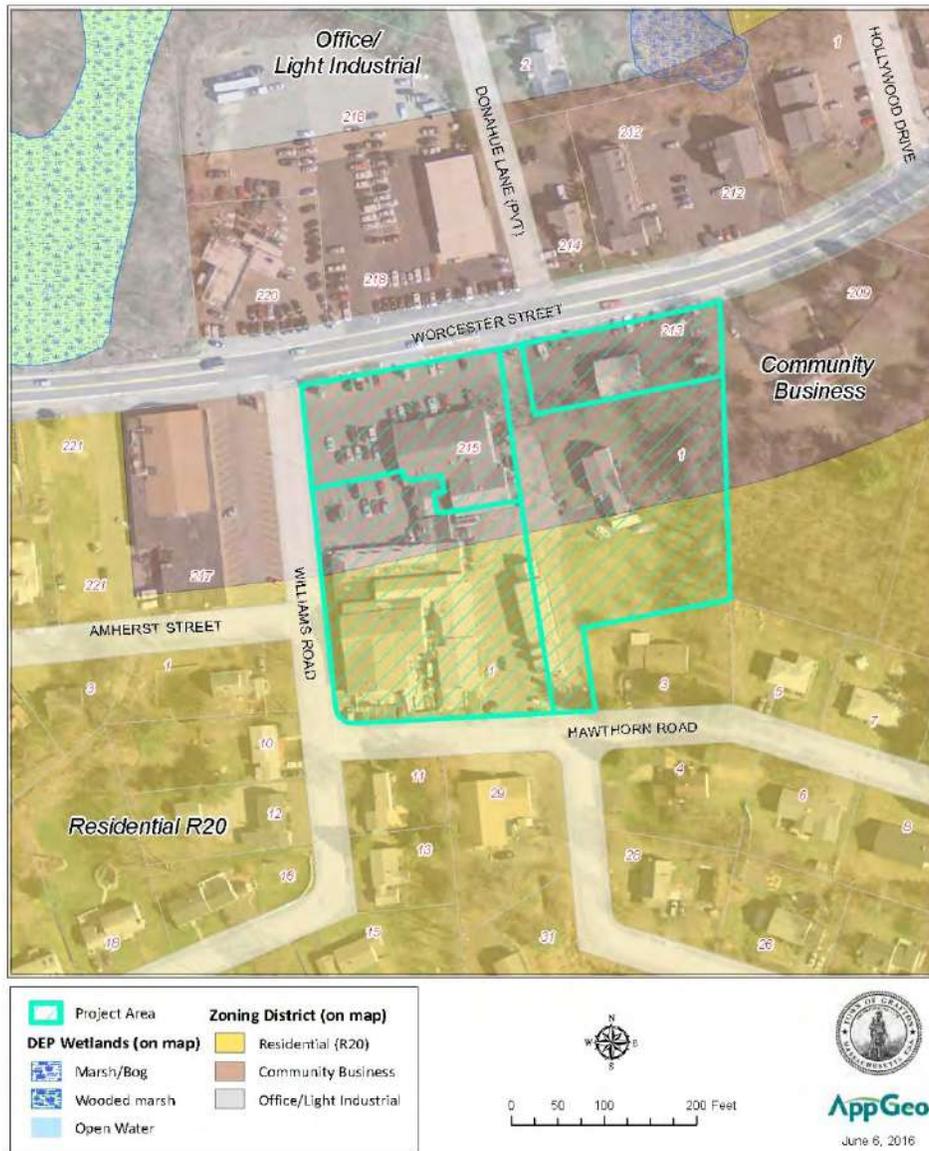
Legend

- Town Boundary
- Fisherville Smart Growth Overlay
- Priority Development Overlay
- Campus Development Overlay
- Water Supply Protection Overlay
- Easements
- Parcels
- Water Bodies

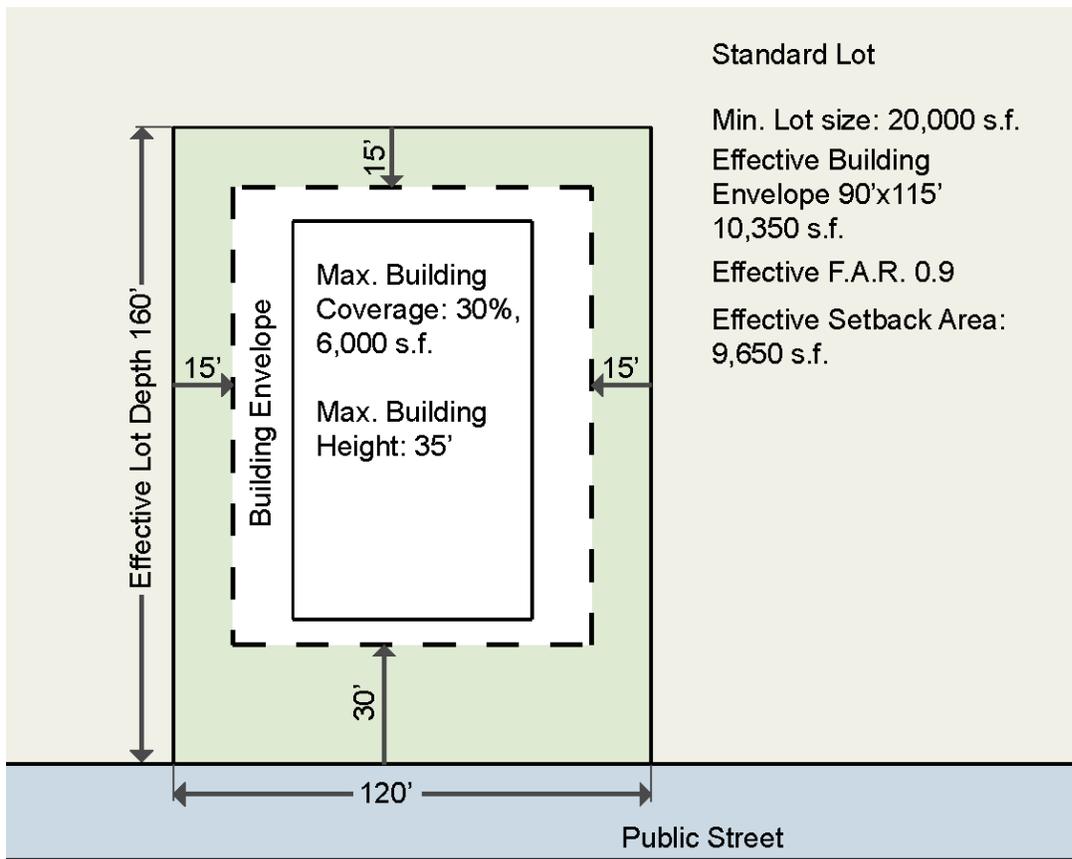
Zone

- Residential (R40)
- Residential (R20)
- Residential Multi-Family
- Village Mixed Use
- Agriculture/Residential
- Neighborhood Business
- Community Business
- Office/Light Industrial
- Industrial

ZONING WITHIN WORCESTER STREET PROJECT AREA (2016)



Zoning District	Min. Area (SF)	Min. Frontage/Lot Width (FT)	Minimum Yards (FT)			Building Coverage (% of Lot)	Building Height (FT)
			Front	Side	Rear		
Medium Density Residential (R-20)	20,000	125(5)	30	15	15	30	35
Community Business (CB)	40,000	140	40	15	15	30	35



Design and Dimensional Standards for the Residential 20 District (R20)

years, many also exceed the 30% maximum building coverage of the lot. Therefore, the vast majority of existing homes in the surrounding neighborhoods are pre-existing non-conforming.

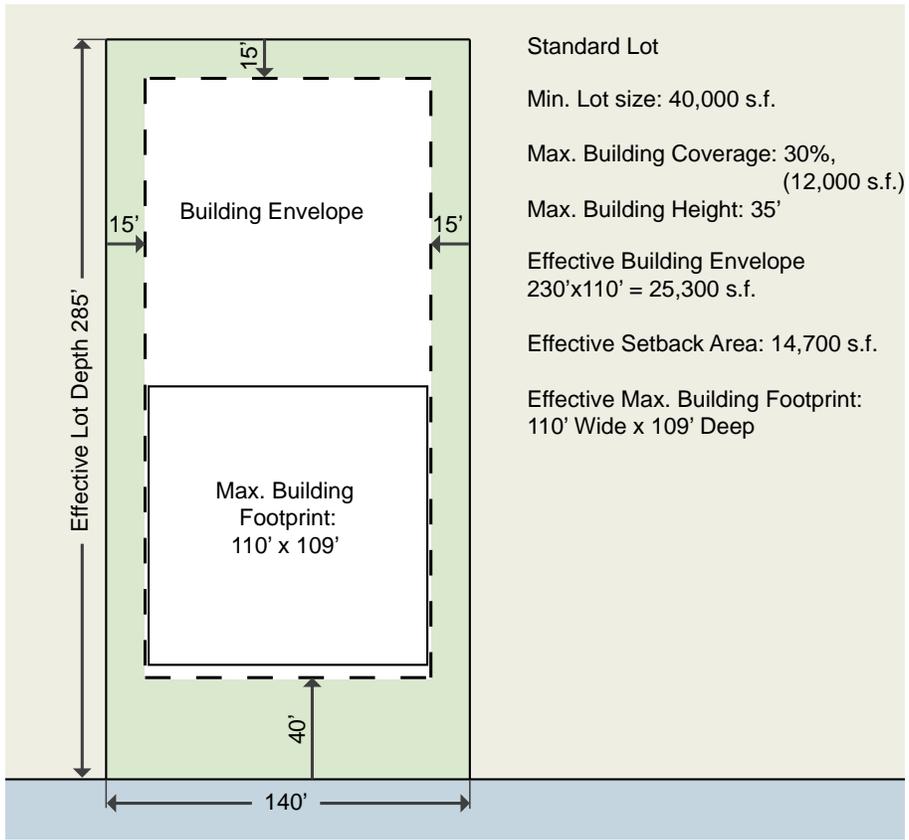
Allowed uses in the R20 as limited primarily to agricultural uses, day care, home occupations, and single family homes. Duplexes, professional, offices, and nursing homes are allowed by Special Permit. Commercial uses are not permitted in R20 although there are a some that operate near the WSNCG Project Area.

Parking Standards

The parking standards in Section 4.2 are generally high with nonresidential buildings greater than 2,000 S.F. required to have 1 space/150 GFA, multi-family required to have 2.25 spaces/DU, and industrial uses required to have 1 space/500 GFA. There are no provisions for shared parking or mixed use such as in Section 10 – Fisherville Smart Growth Overlay District (FSGOD) or the Village Mixed Use Overlay District (VMUOD) which covers South Grafton Village Center. There is a provision for reserve parking but this typically requires excess lot area which is usually not available in neighborhood settings. If the WSNCG is going to fulfill its potential, flexible parking standards such as in FSGOD and VMUOD will have to be adopted.

GRAFTON PARKING REQUIREMENTS VS ITE PEAK DEMAND RATES

Principal Use			Grafton Requirement	ITE Peak Parking Demand Rates	Grafton vs. ITE
Residential	Multi-Family Residential	1 or 2- bedroom unit	2.25 per Dwelling Unit	1.38 per Dwelling Unit	Above
		More than 2 bedrooms	2.25 per Dwelling Unit	1.38 per Dwelling Unit	Above
	Assisted Living	1/2 Employees max Shift + 1/3 Beds	0.41 per Dwelling Unit	Above	
	Nursing Home	1/2 Employees max Shift + 1/3 Beds	0.35 per Bed	Above	
Institutional	Elementary School	N/A	0.17 per student	UND	
	Middle School	N/A	0.09 per student	UND	
	High School	N/A	0.23 per student	UND	
	Day Care	<2,000 SF Bldg - 1 per 200 Net SF; >2,000 SF Bldg - 1 per 150 Net SF	0.24 per student/ 1.38 per employee	Above	
	Church	N/A	0.01 per seat	Above	
Commercial/ Retail	Restaurant	1 per 3 seats + 1 per employee max. shift	0.47 per seat	Above	
	General Office		2.84 per 1000 sq ft	Above	
	Shopping Center	<2,000 SF Bldg - 1 per 200 Net SF;	2.55 per 1000 sq ft	Above	
	Convenience Market	>2,000 SF Bldg - 1 per 150 Net SF	5.5 per 1,000 sq ft	Above	
	Motor Vehicle Sales		1.78 per 1000 sq ft	Above	
	Hotel/Motel	1 per guest room or suite	0.71-0.89 per room	Above	
Recreation	Athletic and Physical Training Facilities	1 per 3 seats + 1 per employee max. shift	3.55 per 1000 sq ft	Above	
	Screen Cinema / Theater		0.26 per seat	Above	
Industrial	Manufacturing/Light	1 per 1.3 employees max. shift	0.75-1.02 per 1000 sq ft/ 0.64-0.97 per employee	Above	
	Warehouse / Distribution	1 per 500 GFA	0.78 per employee/ 0.5 per 1,000 sq ft	Above	
Medical	Hospital	N/A	4.49 per bed	UND	
	Animal Hospital / Kennel / Veterinary Clinic	N/A	1.6 per 1000 sq ft	UND	



Community Business District

5.0 THE PUBLIC'S VIEW

Project “Kick-Off” Meeting

The project team conducted a kick off meeting on September 9, 2016 with the Planning Department staff and other key project participants. The purpose of the meeting was to review the project scope, discuss the public participation process, and draw up a tentative schedule for community workshops. The project team conducted a site visit of the Worcester Street Neighborhood Center & Gateway Project Area with Town staff to get an on-site perspective of the area and begin the discussion of key issues and opportunities.

PUBLIC CHARRETTE

Public Walking Tour

A public walking tour of the Worcester Street site was held on the afternoon of May 11 2017, prior to a public workshop that evening. Approximately 20 neighborhood residents, business owners, and other stakeholders attended the site visit.

Participants were invited to show the consulting team any aspects of the site which they felt were important. The group discussed the disjointed and outdated character of the current group of buildings, which businesses they currently found useful or would like to see added to the site, issues concerning traffic and parking, and overall visions for how this part of Grafton could take shape in the future.

Public Workshop

The public workshop was held on May 11, 2017 in the Brigham Hill Community Barn. The workshop provided an overview of the project's goals, findings to date, issues that need to be addressed, and opportunities in the future to create a vibrant neighborhood center and gateway. This was primarily a “listening workshop,” designed to clarify and verify the hopes, concerns and dreams of neighborhood residents and business owners. The objectives of the workshop

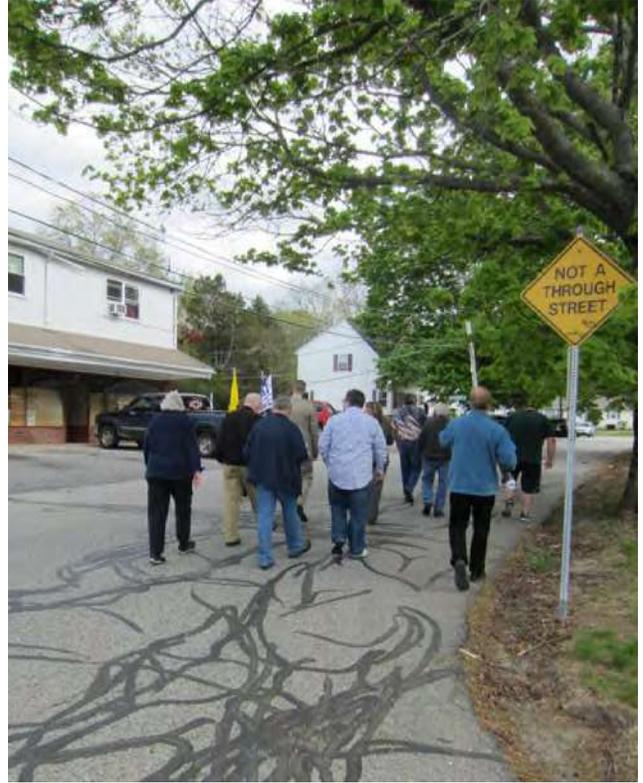
were as follows:

- Review and verify mapping and analysis describing existing site features and suitability for future growth;
- Identify issues and problems in the project area that need to be addressed;
- Identify opportunities for the future;
- Measure public support for general conservation and redevelopment strategies; and
- Work to define a shared vision for a Worcester Street Neighborhood Center and Gateway.

A series of maps, models, and images were on display for public viewing. Welcome and introductions was followed by a presentation of mapping and analysis. Participants were then directed toward 3 Feedback Station where they could work on problems and opportunities. The first was a mapping station where participants could identify issues related to the Worcester Street corridor and surrounding neighborhood in terms of how future development in the WSNCG Project Area might impact these areas and how they could be addressed.

The second station featured four alternative scenarios for the future redevelopment of the site. Each alternative was illustrated with a sketch plan and a simple model. Participants gave the project team feedback on their preferred scenarios and were able to use the models to explore additional ideas for the future use and development pattern on the site.

The third station was a visual preference survey. Here participants were asked to do “dot voting” on a series of images of buildings, site amenities, and streetscape treatments and rank them based on their desirability for the project area. For any image, they could place a red dot to indicate “this is not a good fit for the area,” a green dot for “this is a good fit for the area,” or a yellow dot for “maybe this is a good fit.” The dots were added up with a positive or negative multiplier factored in to reach a total score for each image. (The entire survey and results are available in the appendix.)



About 20 residents, business owners, and town officials attended a public walking tour of the site.



A public workshop allowed residents to discuss their vision for the site, and to respond to various design and planning scenarios.



The workshop engendered lively discussion about the future of the site, and allowed participants to visualize alternatives through site plans and simple models.



Workshop participants indicated their preferences for various types of architectural and landscape elements by placing a red or a green sticker on photographs.



Study models of design alternatives were on display at the public workshop. Participants could swap out the different alternatives on the existing site context model.

6.0 NEIGHBORHOOD CENTER ILLUSTRATIVE PLAN

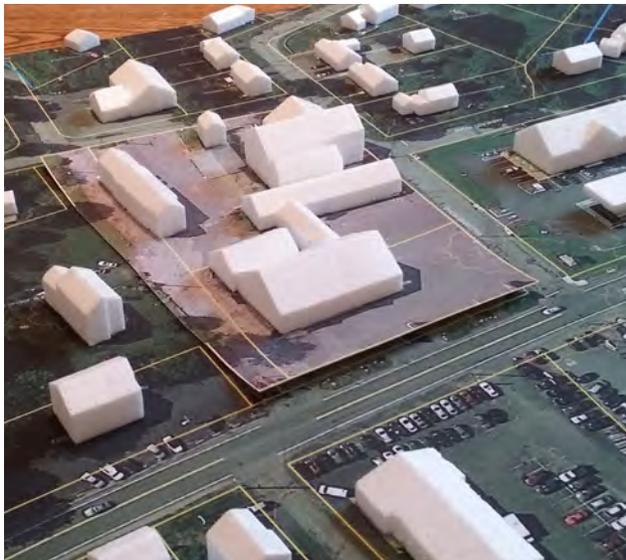
CONCEPT PLANS AND MODELS

The consulting team of Dodson & Flinker and Brovitz Community Planning & Design developed four conceptual design alternatives for redevelopment of the Worcester Street site, with a sketch plan and study model for each alternative. The four options are described in the following pages. Each represents a different arrangement of mixed use and residential buildings with contextually appropriate design and scale. For the purpose of this exercise the limitations of current zoning were set aside, though each scenario complies with accepted practices for building size and parking ratios.

A primary objective of the design alternatives was to explore the potential for a walkable village center for the surrounding neighborhood, by arranging buildings to create a street edge, consolidating parking within the interior of the block (supplemented by on-street parking), and creating attractive streetscapes and outdoor spaces.



A sketch plan and a model was used to illustrate each alternative.



An existing conditions model allowed workshop participants to compare the concept models against current site conditions.

OPTION 1: MIXED USE BUILDINGS SURROUND PARKING





Two-story mixed use buildings on Worcester Street, multifamily residential buildings on Hawthorne Street, and narrow mixed use buildings on Williams Rd and Joncas Terrace fully enclose parking within the interior of the block (looking south).

OPTION 1

In option 1, two-story mixed-use buildings form a traditional village street edge along Worcester Street. Smaller, narrower mixed use buildings line the edges of Williams Rd and Joncas Terrace, while multifamily residential buildings edge Hawthorne St. With narrow enough buildings along Williams Rd and Joncas Terrace, there is space to enclose all the necessary parking within the interior of the block. Vehicular access through the block extends from Amherst Street to Joncas Terrace. Plazas, sidewalks, street trees, rain gardens, and on-street parking make the block welcoming and walkable.



Multifamily residential buildings line Hawthorne St along the southern edge of the block (looking north).

OPTION 2: MIXED USE BUILDINGS CONCENTRATED ALONG WORCESTER ST AND WILLIAMS RD





2 story mixed use buildings on Worcester Street and Williams Road plus multifamily residential buildings on Hawthorne St enclose parking within the interior of the block (looking north).

OPTION 2

In option 2, two-story mixed-use buildings along Worcester Street and Williams Road and multifamily residential buildings along Hawthorne Street enclose parking on three sides of the interior of the block. Vehicular circulation occurs through the middle of the parking lot, connecting Williams Road and Joncas Terrace. A landscape buffer along Joncas Terrace on the eastern edge of the parking lot helps to screen the view of cars from the existing residences across the street. A central plaza facing Amherst Street, framed by buildings, provides a focal point. Additional plazas, sidewalks, street trees, rain gardens, and on-street parking make the block welcoming and walkable.



2-story mixed use buildings create a strong street edge along the corner of Worcester Street and Williams Road, with plazas, walkways and street trees in between (looking south).

OPTION 3: MIXED USE BUILDINGS FORM VARIED STREET EDGE





Two-story mixed use buildings on Worcester Street and Williams Road, and residential townhouses on Hawthorne Street enclose parking within the interior of the block (looking north).

OPTION 3

In option 3, two-story mixed-use buildings form a varied, pedestrian-scaled street edge along Williams Road and Worcester Street, while residential townhouse buildings front Hawthorne Street. These buildings enclose parking within the interior of the block, with garages attached to the townhouses along the southern end of the parking lot. Vehicular circulation occurs through the middle of the parking lot, connecting Williams Road and Joncas Terrace. Landscaping along Joncas Terrace on the eastern edge of the parking lot helps to screen the view of cars from the existing residences across the street. Plazas, sidewalks, street trees, rain gardens, and on-street parking make the block welcoming and walkable.



Two-story mixed use buildings, on street parking, street trees, sidewalks and plazas create an attractive streetscape along Worcester Street and Williams Road (looking south).

OPTION 4: VARIED STREET EDGE, RESIDENTIAL COURTYARDS





Parking within the interior of a mixed use block includes residential garages, which create private courtyards for the townhouse units (looking south west).

OPTION 4

Option 4 is similar to option 3, but with a different parking configuration and detached residential garages serving the townhouses. Two-story mixed-use buildings along Williams Road and Worcester Street with residential townhouses along Williams Road and Hawthorne Street enclose parking within the interior of the block. Private garages for the townhouses in the southern half of the block are accessed from the parking lot area, and form private courtyards for each residential unit. A landscaped buffer along Joncas Terrace on the eastern edge of the parking lot helps to screen the view of cars from the existing residences across the street. Plazas, sidewalks, street trees, rain gardens, and on-street parking make the block welcoming and walkable.



Architecturally varied residential and mixed use buildings fit the scale of the surrounding neighborhood, while parking is contained within the interior of the block (looking north).

7.0 ACTION PLAN

Based on the project area evaluation, on-site observations, input from town staff and officials, and feedback from neighborhood residents and business owners, the following action plan was prepared.

GENERAL GOALS FOR THE PROJECT AREA

Create a new zoning district and “placemaking” development standards for the Worcester Street Neighborhood Center & Gateway Project Area that achieves the following community planning goals and development objectives:

- Establish an attractive and vibrant gateway to Grafton from the west.
- Facilitate sustainable development that is consistent with the latest Town Master Plan, Affordable Housing Production Plan, and Open Space & Recreation Plan (OSRP) which have been adopted by the Town of Grafton.
- Provide incentives for property owners, business owners, and developers to reinvest in the WSNCG District, and respond to market opportunities for diverse residential unit types and mixed-use development in an attractive and complimentary way with the surrounding neighborhoods.
- Provide “lifecycle” housing choices for a range of households in all income, age, size, and family types in order to meet the goal of preserving community character and providing opportunities for all residents.
- Expand opportunities to live, work, eat, shop, play, and obtain services in close proximity to each other to reduce the time, expense, and dependency on the personal automobile.
- Expand opportunities for small locally-owned businesses and other entrepreneurial activity.
- Foster sustainable development, low impact design (LID) and green infrastructure with appropriate standards for parking, energy, water, sewer, stormwater management, and protection of the Town’s public water supply.

- Establish development standards, design guidelines, and review procedures that ensure a predictable, fair and cost-effective, efficient, and expeditious permitting process.
- Make strategic “Public Realm” enhancements to create an attractive gateway, facilitate intermodal transportation, and support private reinvestment in property.



This photograph (Pine Hills, MA) illustrates recommended design characteristics for the WSNCG Project Area: traditional building design; mixed use at a comfortable neighborhood scale; outdoor gathering spaces; and attractive streetscapes with shade trees.

IMPLEMENTATION OF THE ILLUSTRATIVE PLAN

Based on the illustrative plan for future growth and change in the WSNCG Project Area, a series of recommended actions has been organized below. These recommendations are also based on input from Town staff, local boards and commissions, project area stakeholders (primarily neighborhood residents and business operators), civic organizations, and interested citizens who participated in the public workshop.

The WSNCG Illustrative Plan breaks down into a series of public and private actions. These include a detailed framework of potential changes to the zoning map and development standards, new thoroughfare (streets, sidewalks and trails) network connections, the integration of active open spaces and streetscape enhancements, and infrastructure expansions, all necessary to create a vibrant mixed use district and

pedestrian environment. Other recommendations address incentives for reinvestment in private properties. Several recommended actions will also require a cooperative partnership between the Town and property owners to achieve the vision of the community for the WSNCG District.

ADOPT THE WSNCG STRATEGIC AREA PLAN INTO THE GRAFTON MASTER PLAN

The WSNCG Strategic Area Plan should be adopted by the Town as an element of the Grafton Master Plan. Adopting this Strategic Action Plan as part of the Master Plan will allow the Planning Board to refer to (and utilize) the recommendations of the plan as part of site plan reviews in the district to guide applicants towards the desired outcomes. Since the Master Plan is used as a guide for municipal investment and to enhance grant funding, adopting the Strategic Plan as part of the Master Plan can also enhance these efforts.

PUBLIC REALM IMPROVEMENTS

Streetscape Improvements

The Worcester Street corridor between the Millbury town line to the west and N. Main Street (Route 30) to the east should be upgraded through a series of streetscape and traffic management improvements such as the following:

Provide for a consistent 2-lane cross section with intermittent center turn lanes and landscaped medians. Near the Millbury line, a landscaped median should include a “Welcome to Grafton” sign to establish a formal gateway treatment from the west.

Curb-cuts should be managed throughout the corridor including the consolidation of access points using shared driveways and side streets. Open curbcuts should be reduced to a maximum width of 22 feet, with driveways limited to 1 per parcel.

A minimum 5-foot tree belt and 5-foot sidewalk should be installed along the corridor. A variety of street trees should be planted along the corridor to enclose the street and provide a canopy over time.

Streetscape improvements should be implemented

through a combination of public capital improvement projects and private investment resulting from new development and the site plan review process.

Bicycle and Pedestrian Facilities Network

Currently there are only partial sidewalks and no bike lanes along the Worcester Street Corridor. As this area transitions to mixed-use, pedestrian and bicycle access will be critical. As illustrated on the WSNCG Vision Plan, a network of these facilities should be planned for and connections made between the Project Area and surrounding neighborhood. Strategically located cross walks should also be sited along the corridor to provide safe access for pedestrians and bicyclists.

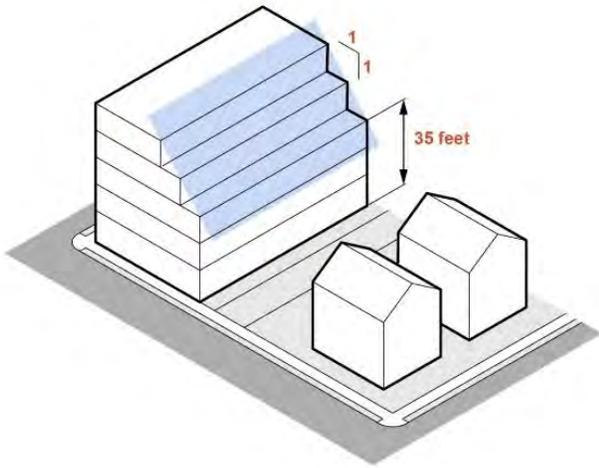
Open Space and Trails

While there are hundreds of residents that live off the Worcester Street Corridor in the northwest section of Grafton, there are relatively few recreational amenities. Airport Park is the only formal public recreation facility in the area and it is limited and not well connected to nearby neighborhoods. The Town should work with Wyman-Gordon, Grafton Land Trust, and other property owners to identify locations for potential future active and passive recreation, where a network of trails could connect with neighborhoods on the north and south sides of the Worcester Street Corridor. Within the WSNCG Project Area, space is limited for open space but gathering spaces such as plazas, outdoor dining terraces, and rooftop gardens are possible.

ADOPT NEW NEIGHBORHOOD CENTER MIXED USE DISTRICT

Zoning District Boundaries

The Town should create a Neighborhood Center Mixed Use District (NCMUD) as a new base zoning district to replace the CB district and portions of the R-20 district in the WSNCG Project Area. Future expansion of this new district might also incorporate properties on the north side of Worcester Street currently in the CB and OLI zoning districts. This would enclose both sides of Worcester Street with attractive buildings, creating an attractive gateway into Grafton.



Typical street enclosure step-back standards for a Neighborhood Center Mixed Use District.

Purpose and Intent

The NCMUD should provide for small scale and neighborhood oriented mixed uses including commercial, light industrial (fabrication and maker space), civic/ publicly-oriented uses, and a range of residential unit types other than detached single family homes. Zon-

ing standards should ensure that the scale and density of development is compatible with the surrounding neighborhood; occurs in a pedestrian-oriented pattern with buildings placed toward the front of the property creating enclosure on the street; parking located to the side or rear of the buildings; integration of attractive streetscapes and active gathering spaces on site; and connected to surrounding properties with sidewalks to enhance walkability.

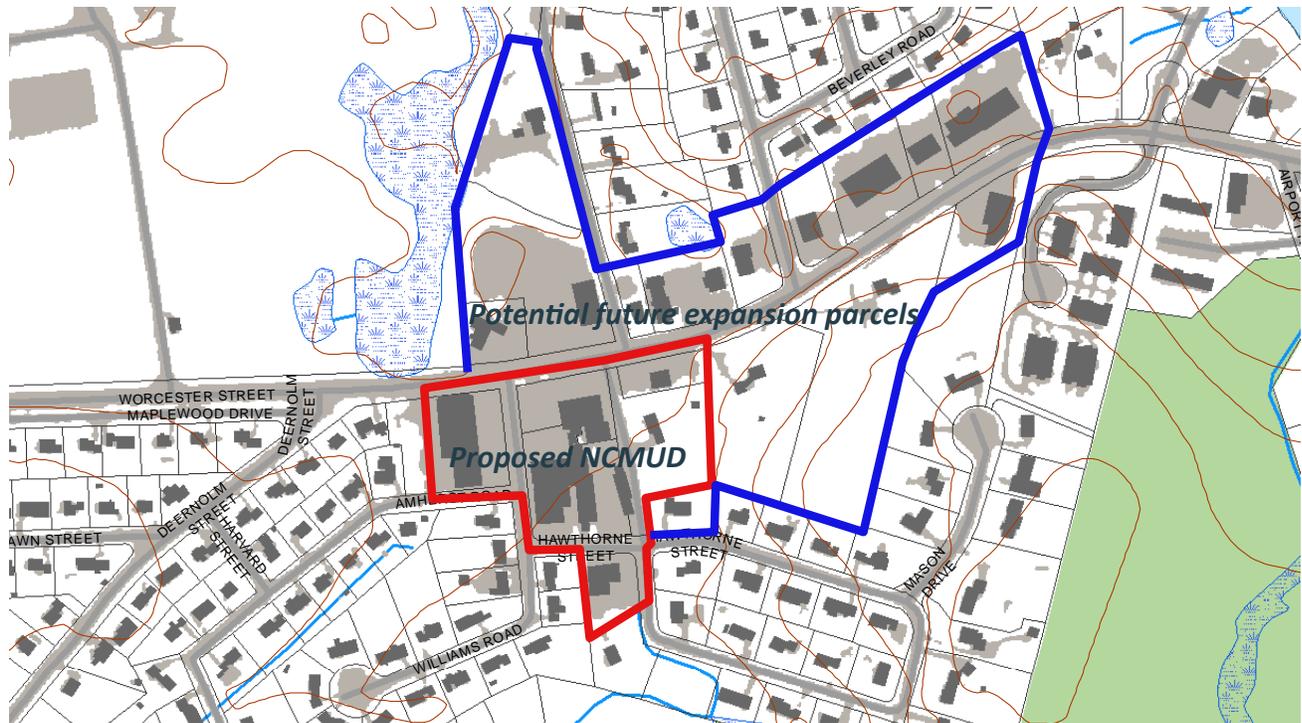
Permitted Uses and Building Types

Allowed Uses: The current Intensity of Use Table in Section 3.2.3.2 of the Grafton Zoning By-Laws has been modified below to allow for a range of uses and building types under the new NCMUD that provide for small-scale mixed-use development with moderate-density residential building types such as townhouses, condominiums, apartments, and Live/Work units.



Typical street enclosure standards for a Neighborhood Center Mixed Use District.

PROPOSED NEIGHBORHOOD CENTER MIXED USE DISTRICT FOR WSNCG PROJECT AREA



3.2.3.2 – Intensity of Use Schedule/Proposed Addition

Zoning District	Min. Area (SF)	Min. Frontage/Lot Width (FT)	Yards (FT)			Building Coverage (% of Lot)	Building Height Min. / Max. (FT)
			Front	Side (Min.)	Rear (Min.)		
Neighborhood Center Mixed Use District (NCMUD)	5,000	40	30	0/10	5	80	14/35

Building and Development Types: Certain building and development types have been added to the Use Regulation Schedule (3.2.3.1) for the NCMUD to facilitate mixed use and diversity in the housing stock. This includes the following:

- Single Family Attached (Townhouses and Row-houses)
- Live/Work or Shop House (Single Family with Commercial)
- Mixed Use Building or Development
- Flex Space/Fabrication Building or Use
- Civic Buildings
- Co-Housing Development

Ground Floor Use Requirements: Frontage Zones ensure that ground floor uses are active and publicly-oriented to take advantage of their visibility from the street. In the NCMUD, ground floor spaces fronting along Worcester Street and Williams Road should include restaurants, shops, personal services, and other active uses to provide for a walkable environment and the best opportunity for the business to succeed. This could not be accomplished if residential uses or other non-public spaces were located a ground level. These types of uses are permitted but only above the ground floor or on secondary streets where privacy can be maintained.

BUILDING DESIGN STANDARDS: EXAMPLE IMAGES



Townhouse



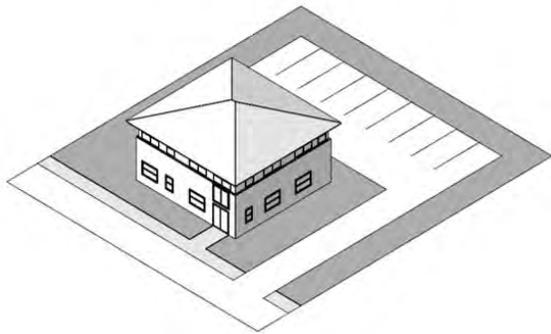
Live / Work



Mixed Use



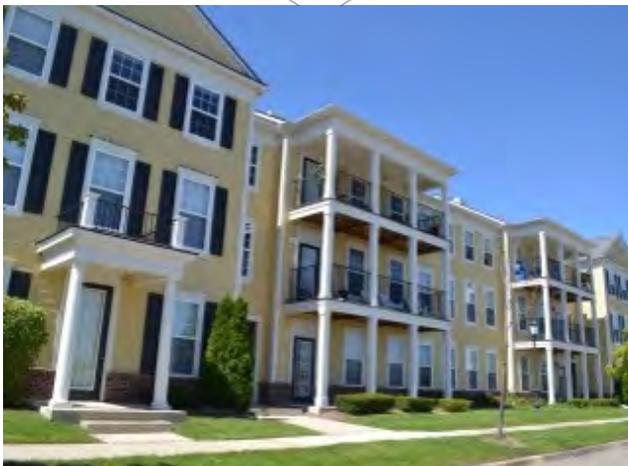
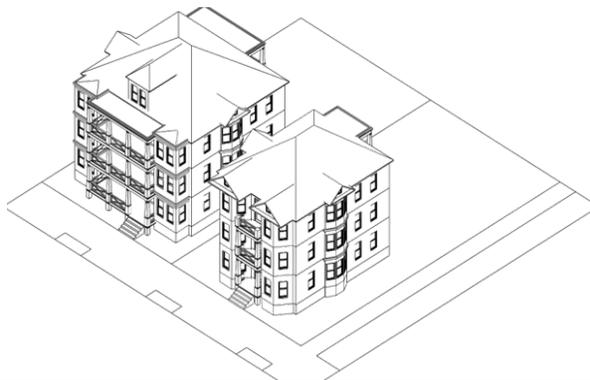
General Commercial



Maker Space / Fabrication



Community Building



Apartment

The purpose of this requirement is to ensure existing or fledgling clusters of retail and/or restaurant uses are not interrupted and diminished by less active ground floor uses such as residential or back office space. These uses activate the pedestrian environment and allow for clustering of complimentary uses in the most visible locations, increasing their rate of success. Proposed Frontage Zones for the NCMUD are identified on the preliminary Zoning Map and Permitted Ground Floor Uses are identified on the modified Intensity of Use Table above.

Building Placement and Lot Standards

The primary intent of Building Placement and Design Standards in the new NCMUD should be to shape the physical and functional character of the area through building placement, form and design. The Building Form Standards provide the minimum level of control necessary to meet this goal while providing a range of opportunities appropriate to the desired character of the new NCMUD. The Building Form Standards establish basic design parameters, including the building envelope and certain permitted or required elements

Building Frontage Zones and Types



Frontage Zones provide for active ground floor uses in where pedestrian activity is desired such as a neighbor center. While maintaining common design standards throughout the district, establishment of frontage zones along Worcester Street and Williams Road near the intersection would achieve this goal while supporting office and residential uses elsewhere in the district.

such as size, massing, articulation, height, fenestration, and pedestrian-oriented encroachments and elements (i.e. porches, balconies, terraces, awnings, signs, displays, etc.).

Building Envelope: The Building Envelope prescribes the specific set of dimensional standards that apply to all properties. Building Envelope Standards typically consist of minimum lot size, setbacks, frontage, building coverage or floor area ratio (FAR), and building orientation. In the NCMUD, the minimum lot size and frontage requirements should be low (i.e. 5,000 SF/50' frontage where public sewer and water is available). This is because the size of the lot is realistically determined based on standards directly related to use, size of the building, and required parking and open space. Additionally, having a larger minimum lot size requirement may arbitrarily and unintentionally deter small start-up businesses and services desired in the WSNCG District.

The side yard setback of 0 to 10 feet allows for buildings to have a common wall as is the case in traditional village and neighborhood centers. It also allows for pedestrian access and shared driveways that lead to parking behind the buildings.

Build-To-Zone (BTZ): The BTZ is the area along the frontage representing the minimum and maximum setback from the Street Line (edge of the public right-of-way) in which the façade of the primary building must be located. The BTZ is generally determined by the type of building. For example, in the new WSNCG District:

- Commercial buildings should be “permeable” and typically have small setbacks 0 to 30 feet to allow for sidewalk seating or dining terraces to be located in front of the building. These should be at grade with the sidewalk.
- Residential buildings should provide “privacy”

and typically have a moderate setback (10 to 30 feet and be slightly elevated above grade.

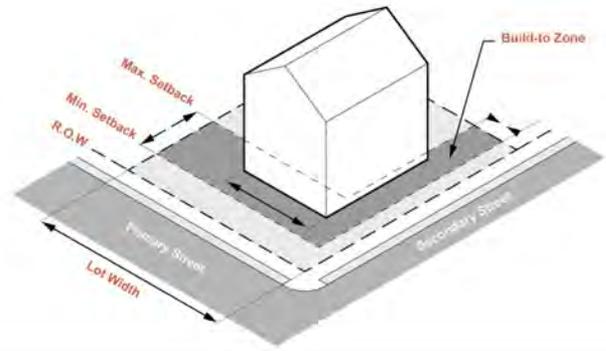
- Civic buildings should be “prominent” and should typically be setback further and elevated higher above grade.

The BTZ in the new WSNCG should ensure that buildings create a relationship with the street and sidewalk to improve walkability. Parking should not be allowed between the building and the Street Line except under special circumstances. (See Special Parking Requirements below). The BTZ provides flexibility for **Active Open Space** amenities between the front façade and street line such as outdoor terraces and forecourts that contribute to the pedestrian environment. These types of site development standards provide for a degree of variation from adjacent buildings while maintaining consistency in overall character and street enclosure. Other building elements such as stoops, balconies, bay windows, eaves, outdoor seating, awnings, blade signs, and similar elements may encroach beyond the Build-To Zone, while porches typically may not.

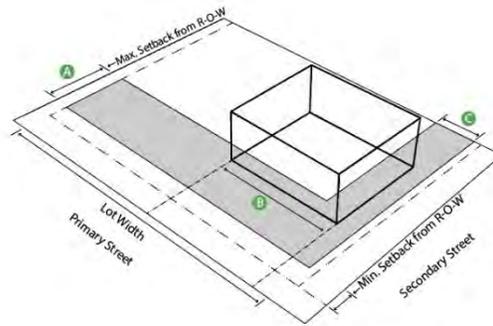
Build-To-Zone Occupancy: This is the percentage of the Build-To Zone that is occupied by the principal building’s primary façade. The purpose of BTZ Occupancy is to ensure that the street enclosure is generally maintained along a large percentage of fronting buildings. Active spaces such as dining terraces may count towards this requirement, depending on the location. Building facades and uses that are more pedestrian-oriented (i.e. shops and restaurants) will typically have higher occupancy requirements than residential or auto-oriented buildings and uses.

Building Design Standards

Façade Activation: In addition to the placement and orientation of new buildings close to the sidewalk, the building facades in the NCMUD should actively engage the pedestrian, bicyclist, and driver. Blank walls should be avoided and long buildings should be articulated to break up the mass. Windows and doorways should be large with clear openings and attrac-



The build-to-zone (BTZ) is defined by the specified building placement and pedestrian orientation standards, with a focus on defining the maximum setback and use of space between the frontage façade and the street line.



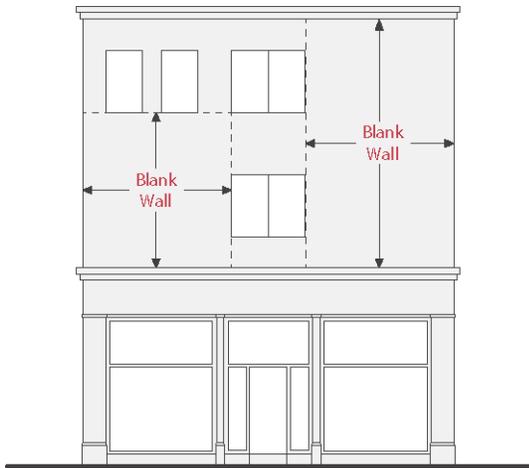
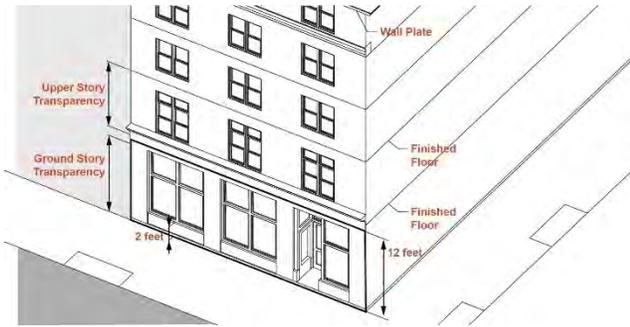
Build-to Zone Occupancy (B) designates the minimum percentage of the frontage that has to be occupied by the building.

tively decorated. Other façade elements that contribute to a vibrant pedestrian environment include attractive awnings, signs, lighting, terraces, balconies, merchandise displays, and street furniture.

Building Size: A maximum building floor-plate (footprint), gross square footage, and number of dwelling units per building should be included in the NCMUD so that new buildings are at an appropriate scale for the context and development patterns in the WSNCG Project Area. This may also be achieved with a Floor Area Ratio standard for certain types of buildings. Suggested bulk standards for consideration in the NCMUD are as follows:

Maximum Floor Plate: 5,000 S.F.

Maximum Gross Square Footage: 20,000 SF



Façade activation standards and character examples

Maximum Residential Units/Building: 24

Maximum Floor Area Ratio: 1.0

Building Height: Currently, maximum height in the CD and R20 districts is 35 feet. It is recommended that maximum height remain 35 feet in NCMUD. There should be a minimum height requirement for the front façade elevation such as 14 feet. The purpose of the minimum height requirement is to ensure that street enclosure and active streetscapes are maintained at ground level. Single story buildings can be enhanced with large storefront windows, transoms, parapets and decorative elements such as cornices, pediments, brackets, and balusters.

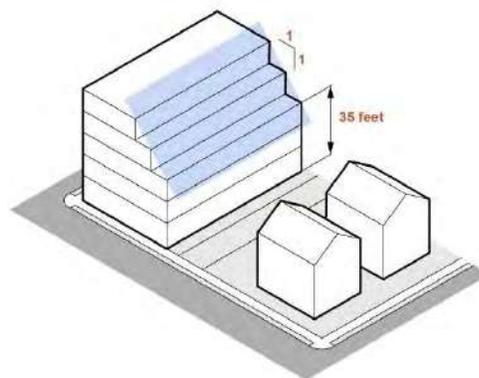
Building Stepbacks, Setbacks, and Street Enclosure: To address compatibility with neighboring buildings and the street, the NCMUD could also require a **stepback** for buildings over 2 stories to avoid shadowing and a canyon effect over the street. The **total**

street enclosure should also be considered in the new development standards for the NCMUD. This is determined by measuring to the distance between buildings on opposite sides of the street in relationship to their heights. This is also known as the **Building Separation to Height Ratio**. In a traditional neighborhood district, such as the NCMUD, a ratio of 0.5 to 1.0 would provide appropriate amount of street enclosure and an attractive pedestrian environment without creating a “canyon effect” with high levels of shading on the sidewalk.

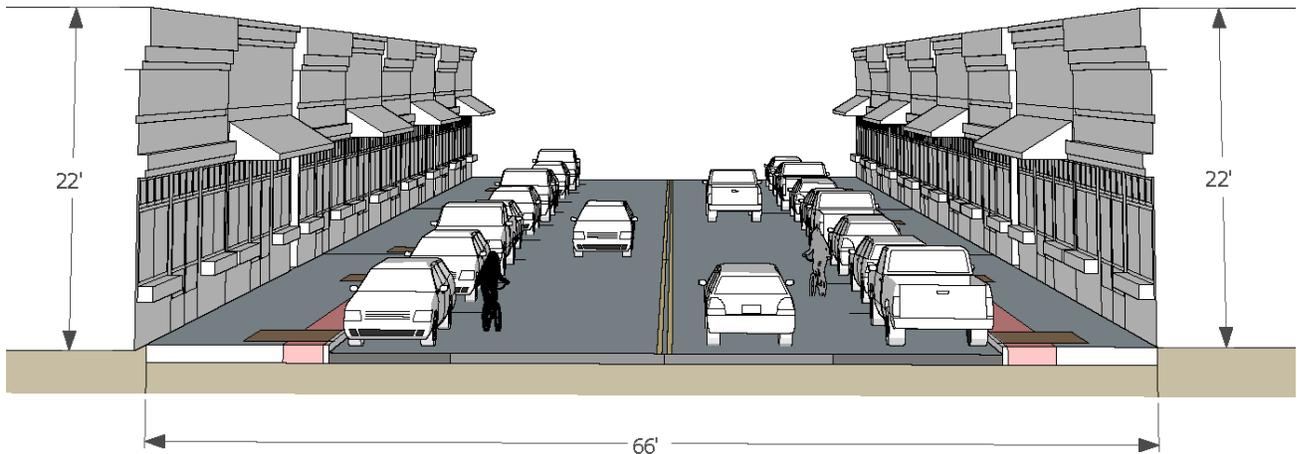
Parking and Loading Standards

Parking requirements are typically a major factor in site plan design, and flexibility in the standards is critical in a traditional neighborhood center. Where on-site parking is needed in the NCMUD, the intent of parking and loading standards should be to provide an adequate number of spaces, shared facilities, and access to parking areas while avoiding vast surface lots and curb cuts that create low-interest areas and conflict points for pedestrians. Excessive and consistently underutilized parking also creates a wasted economic and community development opportunity. Where applicable, the requirements should result in new on-street and shared off-street parking as an alternative to inefficient single-purpose reserved parking.

As an alternative to the current parking standards under Section 4.2 of the Grafton Zoning By-Laws, the parking standards in Section 10.11 (Fisherville SGOD) and Section 12.7 (South Grafton/VMU District) should



The Bulk Plane Diagram illustrates a stepback of the upper floors of a building from the front facade at certain height to avoid shadowing or the “canyon effect” on the street and sidewalk.



Street enclosure example measuring the ratio of building heights on both sides of the street to the distance between buildings across the street. A comfortable ratio for a small neighborhood center is about .75.

be used as guidelines for providing relief from high requirements. Additional flexible parking techniques that should be integrated into the NCMUD are the following:

Minimum and Maximum Parking Ratios: Since many people will walk to the neighborhood center, less parking is needed on site. Generally, commercial parking should have a minimum parking ratio of 1 space/400 GFA, and residential should be 1 space/DU. In addition to minimum parking ratios, the Town should consider setting a maximum parking standard to prevent excessive and unnecessary parking from being created in the new NCMUD.

Shared Parking and Mixed Use: Allow for a combination of uses with shared parking facilities and an agreement between owners. The criteria for determining shared parking should consider proximity between uses and properties; documented offsets between peak demand; uses having a high rate of parking turnover; or evidence of similar uses and location situations operating successfully with lower amounts of parking. New shared parking manuals published by the Institute of Traffic Engineers (ITE) and Urban Land Institute (ULI) provide excellent resources for determining the amount of parking that can be reduced on a site by site basis.

Satellite Parking: Required parking spaces should be permitted at off-site locations under the following provisions:

- Off-site parking spaces for customers should be located within 500 feet from the primary entrance of the building along the shortest available pedestrian route.
- Off-site parking spaces for employees should be located within 700 feet from an employee entrance along the shortest available pedestrian route.

Structured Parking: Structured parking, including below and above ground, should be allowed and encouraged in the NCMUD where appropriate. Design standards should require structured parking to be internal to the block, and behind and attached to the building where possible. Where structured parking is placed along the street line it should be well landscaped to minimize visual impact from the street and sidewalk. Liner commercial uses at the ground floor should also be allowed and encouraged at the ground floors. Structured parking should have multiple openings, provide reasonable floor heights, and be well lit to provide a sense of security.

Parking Requirement Exemptions: Maximum parking limits should be waived for structured parking where spaces provided within the footprint of a structure containing one or more other uses, including rooftop, at-grade, or below-grade spaces, provided that additional spaces are made available for lease to other property owners within the new NCMUD in meeting their parking requirements. Additional parking requirements should not be applicable to outdoor dining or similar auxiliary uses on site.

Special Vehicle Parking: In addition to handicapped parking requirements, the Town should encourage the availability of special vehicles in the NCMUD. For example, alternative fuel vehicles should be encouraged (particularly in parking structures). Car sharing services (such as Uber, Zip Car or Enterprise) should be encouraged to provide parking spaces, which would have benefits to neighborhood residents as well.

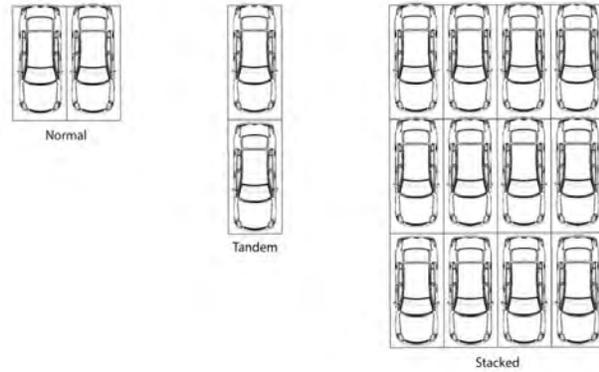
Tandem Parking: Tandem parking provides an opportunity to maximize the efficient uses of land and possibly reduce the number of required parking spaces on site. Tandem parking is managed by occupants of a shared dwelling unit and allows for a reduction in space, with one car to be parked directly in front of another.

On-Street Public Parking Reduction Credit: Off-street parking requirements should be reduced by the number of on-street public parking spaces directly in front of a given property.

Bicycle Parking: Sufficient and conveniently accessible bicycle parking for residential, commercial and mixed uses should be provided throughout the new NCMUD.

Drive-Through Facilities: Drive-through facilities should not be allowed in the new NCMUD District except for unique circumstances and should always be located to the rear of the property without a separate driveway.

On-Site Parking Placement Standards: Off-street parking should be located to the rear of the primary building or a minimum of 5 feet behind the front wall elevation of the building nearest to the Street Line. A landscape buffer should be provided to screen parking areas from the street.



Tandem parking can double the number of parking spaces accessed by each aisle, reducing pavement by a third.

Street Side Parking: Only under special circumstances should the NCMUD allow for parking in front of the building. Street Side Parking is parallel or angled parking provided on a privately-owned lot directly adjacent to the public street right-of-way in combination with a tree planting strip and sidewalk connecting to abutting lots and to the primary building on-site. This would require a cooperative effort between the Town and private property owners but could be applied to Worcester Street, Williams Road, Hawthorne Road, and Joncas Terrace.

Landscaping, Screening and Lighting Standards

The intent of these provisions should be to enhance the pedestrian environment and provide buffers where necessary in the new NCMUD with appropriate landscaping and lighting design. Landscaping standards in Section 12.9.2 (South Grafton/VMU By-Law) should be used as a template with additional standards below:

Private Frontage: Landscaping should include a mix of trees and other plants, and should be properly maintained. Where the building is set back from the street line, Active Open Space with pedestrian amenities and deciduous canopy trees should constitute the primary landscaping elements and should be placed so as to maintain relatively clear views of the ground floor elements including doorways, windows and signs. Hedges or shrubs planted along the front or side street yard property line should not exceed 4 feet in height except when abutting a neighboring area where increased screening is desired.

Parking Lots: Landscaping in parking lots should primarily include shade trees installed at or below the level of the parking surface to allow for capture of stormwater runoff. Plantings should not obscure site entrance and exit drives, or street intersections. Pervious or semi-pervious parking area surfacing materials, such as pervious asphalt, grass, “grass-crete”, or ring and grid systems, are encouraged where conditions allow for adequate infiltration.

Transitional Buffer: Landscaping and screening should be provided as a transitional buffer along perimeter lot lines between the new WSNCG District and abutting residential zones.

Active Open and Amenity Space Standards

It is recommended that a broad range of active public and private open spaces and gathering areas be provided in the new NCMUD that, over time, will amount to a reasonable percentage (such as 10%) of the total land area. .

Developers should reserve a small portion of their site for open space. For properties in residential use,



Conventional parking placement



Side street parking placement

private yards and gardens, forecourts, and courtyards are appropriate. For commercial and mixed-use sites, additional civic gathering and active recreation types of open space could be created (such as identified below). Two or more adjoining property owners within the new NCMUD are encouraged to create joint open spaces that benefit a larger group of people. These spaces can be small, integrated into the site or buildings, and serve dual purposes. Some appropriate open space types for the NCMUD may include the following:

- Plazas and Squares
- Courtyards and Forecourts
- Yards and English Gardens (i.e. residential)
- Pocket Parks and Playgrounds
- Rooftop Gardens and Terraces
- Farmers Markets, Amphitheater, Outdoor Seating and Dining Terraces
- Infiltration Park and Parking Courts (permeable, multipurpose spaces)

Sustainable Development Standards

Sustainable Design and Low Impact Development (LID) techniques are highly recommended in the NCMUD to achieve low net energy consumption, reduce stormwater runoff and improve water quality, reduce vehicle miles traveled, reduce light pollution, and support healthy growth of street trees. Pervious surface materials (i.e. turf, groundcover, gravel, soil, or mulch) should be used for common open spaces and landscaped areas. Pervious paving materials allowing oxygen for tree roots and absorbing stormwater run-off are also encouraged in parking lots and ball courts.

Stormwater Management: Stormwater best management practices should be employed to achieve pre-development hydrology through site design, site development, building design and landscape design

techniques that infiltrate, filter, store, evaporate and detain stormwater close to its source.

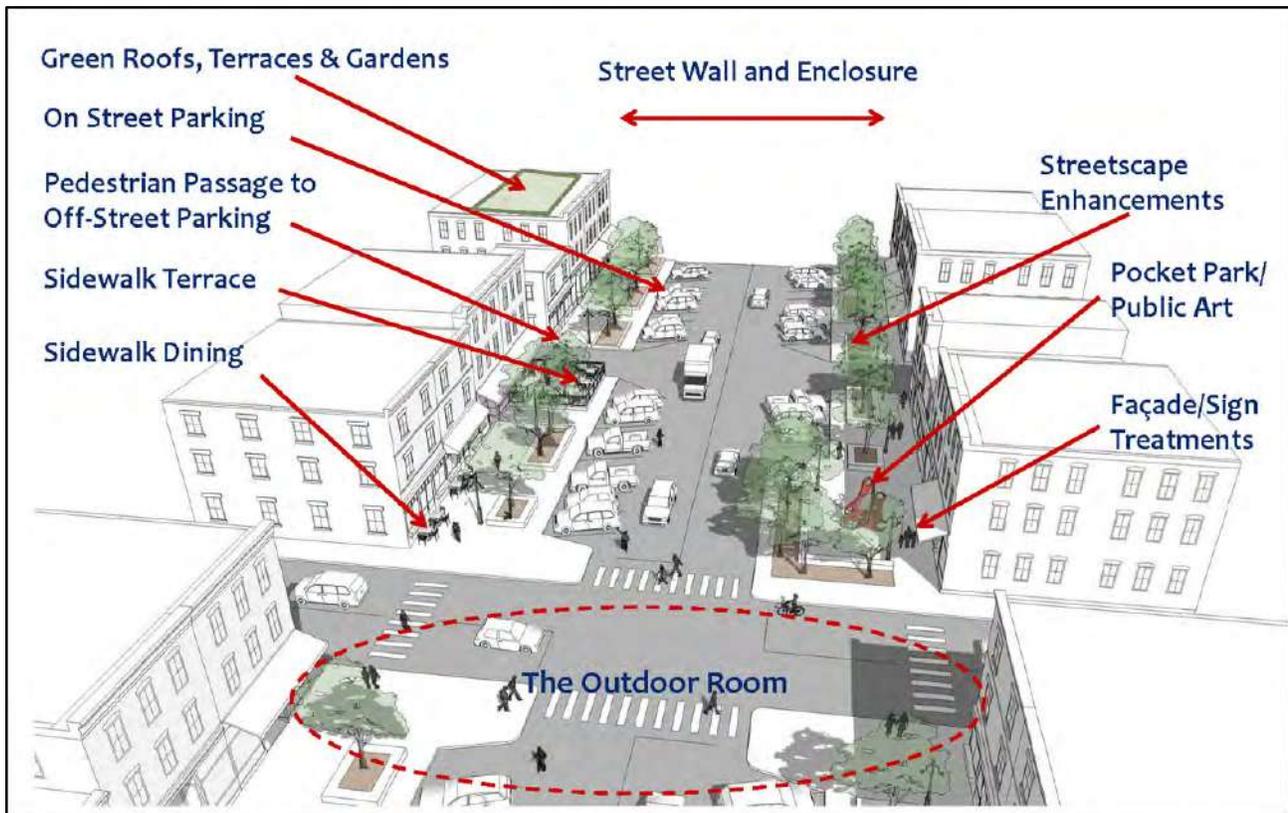
Canopy and Shade Trees: The broad use of street and parking lot canopy trees in the NCMUD is a simple and attractive solution to improving the pedestrian environment and reducing heating and cooling needs for buildings and sites.

Sustainable Landscaping and Open Space: Natural landscaping with non-invasive plants native to local climate and soil conditions should be installed in open spaces. The Town should think of open spaces as part of the stormwater system. For example, an Infiltration Park is a form of bio-retention allowing rainwater to be temporarily captured and stored for a short time, cleaning storm water runoff before infiltration. Surrounding areas can be graded so that the rainwater flows towards the parks.

Building Applications: Buildings in the NCMUD should strive to achieve a zero net energy goal of 100% through best practices in design and construction

practices such as governed by the Energy Star Program and the U.S. Green Building Council LEED Rating System. Some sustainable building design techniques include the following:

- Solar orientation and utilization (thermal and solar photovoltaic).
- Natural cooling (glazing, shading of glazed surfaces, and operable windows).
- Daylighting (using natural light as the primary source of general illumination).
- Heat reflective roofs and pavement.
- Green walls and green blocks.
- Open and simple floor plans.
- Increased insulation in walls and roofs, and triple-glazed windows.



Street activation standards



Private and Publicly Oriented Private Space (POPS) Examples – Pocket Park and Community Garden

- Groundsource heat exchange (closed system geothermal energy).
- Energy Star rated appliances.
- Dual-flush and waterless toilets.
- Greywater recycling systems.
- EcoStar Program (shared recycling streams between businesses).

Other Site Development and Design Standards

Some additional general standards recommended for the NCMUD include the following:

- The primary building entry should be placed at the front of the building (facing the street line) and be clearly identifiable from the street.
- Parking should be placed at the side or rear of the lot. Where possible, break the parking areas up into groups of no more than 20 spaces per area separated by landscaping areas.
- Place as much of the building width at the front of the lot as possible to maximize front façade exposure to the traveling public. The front facade should be kept parallel to the street.
- To reinforce the “street-edge”, align with adjacent buildings which are also close to the street line.

Landscaping can also be used to reinforce this line.

- Link adjacent parking lots or provide shared parking areas which can serve neighboring buildings simultaneously and efficiently.
- Provide sidewalks for the full width of the property with a direct link to the primary building entry.
- Loading docks, service areas and trash facilities should be located at the rear of the building and not be visible from the street. Fences, walls or landscaping should be used to screen them from view.
- Existing, older trees should be incorporated into new site plan development whenever possible.
- Curb-cuts should be limited to a single driveway in and out of the property. Curb cuts should only be as wide as necessary to accommodate needed lanes. Curb radiuses should be kept to a minimum to minimize interruption in the sidewalk. Any raised curbing used at site access points should allow for sufficient stormwater drainage.
- Landscaped islands and other green space should be used to break up impervious surfaces and shade parking plots.
- Provide a continuous landscape screen on property boundaries that abut residential zones.



Driven by new stormwater standards established by US EPA, municipalities throughout the US are using creative ways to store and infiltrate rain water close to the source. With careful design, such areas can also serve to enhance the beauty and functionality of parking lots and pedestrian spaces.

- Using the area in front of the building for outdoor activity, seating and display is highly encouraged.
- Provide supplemental street trees where appropriate, to shade the sidewalk or outdoor terraces while providing filtered views of the front façade by traveling motorists.

All design standards should strive to coordinate all the elements of the building envelope, open space, parking, and streetscape standards. This is critical to establishing a traditional pedestrian-oriented development pattern in the new NCMUD District.

